

# The COMPUTER PAPER

WESTERN CANADA'S COMPUTER INFORMATION SOURCE

NEWS • FEATURES • REVIEWS • EVENTS

IBM &amp; COMPATIBLES • UNIX • APPLE • COMMODORE • ATARI

## HOT NEW NOTEBOOKS!

**\$1.95**

*How to get your  
Life Organized*

# PERSONAL INFORMATION MANAGERS

WE REVIEW TOP  
PC ORGANIZERS

*IN THIS ISSUE*  
*PaperMates for Windows*  
*and*  
*Microsoft Product Review*





# WHY BUY AT CARDZ?

- Low, unexcused, friendly
- Service and support
- 100% satisfaction guarantee
- Fastest service in the industry
- Low prices
- Free delivery
- Free installation
- Free software
- Free training
- Free upgrade

CANADIAN/USA ORDERS  
CANADIAN WARRANTIES

## ALL MODELS INCLUDE:

- 18" Tower Case with LED display, 8 Bays**  
**PLUS: 1.44MB Floppy • Serial, Game & Parallel Ports • Speaker • 101 Key Keyboard**  
**• 250W CSA Power Supply • 10 Card**  
**• All RAM 80ns on faster**

## QUALITY FROM CARDZ

This month Cardz introduces three new amazing technologies from the USA. Silicon Graphics graphics is the most powerful video card available for PCs! The new Pixel 16Color has the revolutionary 32,000 color capability. If you're not dead, and what can we say about Cardz's great new 286-486, the fastest 386 of all! Watch out Tower! — the tower isn't dead yet!

## LASERS/SCANNERS

UPON 386C	PORTSCOPY LASERS
100% new 386C 33MHz 100% new	100% new 386C 33MHz 100% new
100% new 386C 33MHz 100% new	100% new 386C 33MHz 100% new
100% new 386C 33MHz 100% new	100% new 386C 33MHz 100% new
100% new 386C 33MHz 100% new	100% new 386C 33MHz 100% new
100% new 386C 33MHz 100% new	100% new 386C 33MHz 100% new
100% new 386C 33MHz 100% new	100% new 386C 33MHz 100% new
100% new 386C 33MHz 100% new	100% new 386C 33MHz 100% new
100% new 386C 33MHz 100% new	100% new 386C 33MHz 100% new
100% new 386C 33MHz 100% new	100% new 386C 33MHz 100% new

## CARDZ HAS A SALE!

### CARDZ Tower SX-20

- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new

**\$1499**

286-33 to above \$1100

**386-33**  
**\$1799**

### WHOLESALE CARDZ Tower 386-40

- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new

**\$2099**

286-33 to above \$1100

## 486 BIG TIME

### CARDZ 486-25

**\$3299**

- 100% US Motherboard from Daxle
- 4MB RAM 128K Cache
- Fujitsu 120MB 20ms Hard Disk with 2 Yr. Warranty
- VGA Card 16 bit 1024x768
- VGA Color Monitor 1024 x 768 30cms
- 10" Tower Case 2000L CSA
- Focus 2000L Keyboard

### CARDZ 486-33 \$4789

- 100% new 486 33MHz 100% new
- 100% new 486 33MHz 100% new
- 100% new 486 33MHz 100% new
- 100% new 486 33MHz 100% new
- 100% new 486 33MHz 100% new
- 100% new 486 33MHz 100% new
- 100% new 486 33MHz 100% new
- 100% new 486 33MHz 100% new
- 100% new 486 33MHz 100% new
- 100% new 486 33MHz 100% new

## ADVANCED VIDEO CONTROLLERS

### PIXEL ENGINEERING

- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new

### SILICON GRAPHICS

- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new

## RIISING STARZ

### IT'S HERE!

- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new

### MONITORS

- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new

## DOCUMENT PROCESSOR

- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new

## Optical Storage

- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new

## TOP QUALITY FROM CACHE

- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new
- 100% new 386C 33MHz 100% new

## CARDZ

386 / 486 COMPUTERS

1020 West Broadway, Vancouver, B.C. V6J 1Z1 Open 9:30 - 5:30 Mon - Sat

(408) 762-8486 TECHNICAL SUPPORT: 762-8482

FAX: 762-8412 OFFERS ONLY OUTSIDE VANCOUVER: 1-800-578-2911

All items subject to availability. Shipping extra, VISA add 1.5%. Prices are Cash

## WHOLESALE

ONE YEAR

THREE YEARS

LIFETIME

## CARDZ BBS

1020 West Broadway

1020 West Broadway

1020 West Broadway

1020 West Broadway

1020 West Broadway

1020 West Broadway

1020 West Broadway

1020 West Broadway

1020 West Broadway

1020 West Broadway

# VANCOUVER'S #1 Networking Company Provides Best Prices, Quality, Support & Performance

*servers*

*security*

*Local Connection*

*hubs*

*SNA Gateway*



*Case*

*Twins*

*router*

*file lock*

*X.25*

# NETWORK SPECIALISTS

*TCP/IP*

*Unix*



*Xenix*

*record lock*

*workstations*

**3Com**



*Bridge*

*10BaseT*

## Our Network Clients:

BC Hydro  
Kwailkum Secondary School  
Olympia Tiles & Carpet  
Parksville Middle School  
Qualicum Middle School  
St. George's School

and many more...

## DPE COMPUTERS (Since 1983)

775 Homer St., Vancouver, B.C. V6B 2W1

For professional consultation, please call  
Tel: 604-683-7587 Fax: 604-683-9210







# EXTERNAL DRIVES

**BEST VALUE**

PS/2  
PC AT  
Laptop  
Apple

no  
interface  
card  
required

**159<sup>00</sup>**

**IMAQ**  
30

**261-1800**

Imaging Technology Inc.  
Imaging Technology Inc.

# Mailbox con't

none of the CATALYT 885 to your 885 listing.

Since IXL has a specified mandate to evaluate and assist valuations organizations, community in their and corporate groups to get meaningful, we believe that we have a very special and valuable role to play. Also, as a valuation organization member, we appreciate any opportunity to inform people about our services.

We would appreciate it, if you could contact us at (415) 257-1800 to your Father 885 lists. Thank you,  
Peter T. Miller  
President, Pacific Information Exchange Society

It's our perhaps commitment to assisting our list this year. We took the original list from Mind Link and then did our own independent work. If we could not connect with the highlighted value of a member at the other end of the line, we contacted the member from the list. We called repeatedly and at various times of the day in an effort to be complete. It's hard to document a number of popular boards where there were always busy. The reason we felt this matter was justified was that in the past, we have received a large number of complaints from people who want from 885 telephone

numbers from 885 Tel. It seems when people start in 885 they are very anxious to promote the fact, when they stop returning they are less diligent about getting their names removed from the mailing list. We are updating the 885 list on page 27 of this issue.

The Computer Paper welcomes readers' comments. Contact may be edited for clarity and brevity.



COME ON THEN IT'S JUST  
FOR ONE NIGHT... ALL  
I NEED IS A PLACE TO  
CRASH.



Things have changed about the way Vancouver does business.



**R**emember when?  
Barr Business Machines  
began helping Vancouver  
business modernize in  
1957, with such early  
"word processing" units  
as this sturdy Underwood  
No. 5. The spirit of service  
— providing reliable  
sales & timely reliable  
service — is still a part of  
the Barr formula.

**BARR  
BUSINESS  
MACHINES**

1250 West 6th Ave  
Vancouver, BC  
V6H 1A5

Tel: 236-9111  
Fax: 232-0129



Desktop • Laser Printer • Fax/Facsimile • Word Processor • Copier • System • Service AG • Expense Accounting Systems • Supplies • More















## WHAT'S NEW

erly and otherwise all modes of power disturbances before they reach the equipment's sensitive circuitry and components, and because computer equipment is itself a source of electric magnetic power disturbances, this protection is bidirectional and manages power disturbances coming from and going to the equipment.

According to the company, the MicroPC has a UL1449 rating of 200, the lowest UL rating in the industry. Also, it has a rating of less than 200 volts on all three modes under the IEEE M77 Category B impulse test. With a clamping time in microseconds, the device is said to eliminate even the most severe transients quickly, providing the electronic equipment with clean, disturbance-free power. This adds up to enhanced performance and increased reliability over a longer life expectancy.

The MicroPC comes with a 10-year, \$500 warranty.

Contact: Bill Bobelack, TSP Electronics Systems Protection, (604) 584-8638 or (800) 633-6430.

## Zenith Models Open House

MINICOM/VEE, INC., APRIL 23 (PCF)—Zenith Data Systems (ZDS) has moved and expanded its facilities at this writing. The company will be holding an Open House in mid-May at its new premises at 1490... 750 West Parkway St. For further information and a special invitation, call 603-8832.

## Computergraphic Ports Cheaper on Amiga

Many Great Laptops, well-known Amiga writer and maintenance companies that dropped out March, 1991 DTP article's contention that Computergraphic America's Amiga expansion, in fact, these facts are seriously discounted. In fact, PC users will find it cheaper to get Computergraphic from the Amiga and then move them to PC disks.

## Only in Our Dreams.

Western Software was so surprised to see where we reported that the price of their popular PC publishing software had "plummeted" to \$99. In fact, the price had risen from \$149 to \$199. Also, the "free upgrade" of the Mac version is more correctly named an upgrade, according to the company. Contact: Western Software, 404-424-4241 or 415-463-4233.

## Headline Update

Recent software contributed "Who's

winning" information and history, many readers called to tell us that we had printed an incorrect number for 1990 Marketing. Advertisement of the 1990 Marketing and Diagnostic Systems mentioned an incorrect \$1.1 billion. We checked the number as supplied to us and found that we had, in fact, published it correctly. Could it be that the company had published a wrong number in its own literature?

Indeed, when we called, the person there told us that we had the wrong number, and that many other people had called, but he had no idea of what the right number was, just before hanging up, so happened to mention the name of the person that asked the better that had compared the original press release and suddenly, "Oh, I don't those calls were for real! He's now getting married," he, if you had trouble reaching 1990 Marketing before, call back. The number (404) is (404) 254-0512.

## No April Fool

Alert readers may have noticed that the cover of the P.C. edition of our February/The Mac Connection page had been changed to back to March, 1991.

Despite the fact that some of you thought it made a rather subtle April Fool's joke, a much more plausible explanation is that March was such a good month for us, we decided to try it again. We'll go back to 12 months again next year, right?

## The Price Is Right

Dan M. Martin, editor of the Year-over Year Hardware Users Group newsletter, points out that some PC users programs like those mentioned in Group Share's article "Computer Connections" (The Computer Paper, April 1991), aren't necessary if all you want to do is access another PC network.

Says Martin: "To access an MS-DOS computer remotely, use LITTELLER as the DOS command on the host computer (for one year, since PC will be accessing). The computer's remote handling, no matter how well, before closed, and the remote computer must be running a telecommunication program. DELLER has long had this instruction. Easy."

## Corrections &amp; Clarifications

## 386SX BEST BUYS



GoldStar



## Model GT316

- 16 MHz
- 44 MB drive
- 5 1/4" & 3 1/2" floppies
- Super VGA
- DOS 4.01
- Software Bundle



## Model GS310

- 20 MHz
- 124 MB drive @ 19 ms
- 5 1/4" & 3 1/2" floppies
- Super VGA
- DOS 4.01
- Software Bundle



Bring in this ad and receive this fabulous software bundle with your Goldstar purchase

- Eight in one
- Word Publisher
- Personal Cash Manager
- Database Kit
- Speller/Gold
- DOS Manager
- File Manager
- 3 Games

**\$1399<sup>99</sup>**

MSRP

**\$1949<sup>99</sup>**

MSRP

**THE FUTURE SHOP**  
DISCOUNT SUPERSTORES

REGULAR HOURS: MON. FRI. 10A. - 6P. SAT. 10A. - 5P.  
 • BOSTON: 1-800-333-3333  
 • NEW YORK: 1-800-333-3333  
 • LOS ANGELES: 1-800-333-3333  
 • CHICAGO: 1-800-333-3333  
 • DALLAS: 1-800-333-3333  
 • HOUSTON: 1-800-333-3333  
 • PHOENIX: 1-800-333-3333  
 • SAN ANTONIO: 1-800-333-3333  
 • SAN JOSE: 1-800-333-3333  
 • SEATTLE: 1-800-333-3333  
 • TAMPA: 1-800-333-3333  
 • WASHINGTON: 1-800-333-3333  
 • WICHITA: 1-800-333-3333  
 • YAKIMA: 1-800-333-3333

# NewsBytes

## APPLE

### Convert Between Font Types

**FOSTER CITY, CALIFORNIA, APR 10 (AP)—**Apple Software has started shipping Fontographer, a \$99.95 type-shaping and editor for Apple Macintosh systems. Fontographer interacts between Postscript Type 1, TrueType, and Type 3 font file formats using proprietary algorithms which a company representative said provide "the highest-quality screen and print characters for each type format."

A unique feature of this software is its ability to transcribe screen type files into a single font, permitting font access to all fonts a user normally uses.

Fontographer also allows users to create small-cap and oblique typefaces not existing in their files.

For further information, contact Apple Software, P.O. Box 7, Foster City, CA 415-576-6090, AppleLink: D56915.

Contact: Ron McLean, Apple, 415-576-6000.

### Monthly Journal For HyperCard Developers

**LOUISVILLE, KENTUCKY, APR 18 (AP)—**The Cold Group has announced a monthly hypercard journal called *Brink HyperCard*, designed specifically for

software developers. The 14-page publication is priced at \$49 for the year, although a one-time subscription anyone who calls 800-481-0900 or 1-800-325-8726.

Contact: Melissa Hinkley, The Cold Group, 905-481-0900.

### Travelview Video Presentation Software

**INDIANAPOLIS, INDIANA, APR 18 (AP)—**Interstate Inc., an educational Videoscript, which is described as "a program software which provides point-and-click usability for composing video presentations using the Travelview format screen photographic cards." The program uses the video effect capabilities of the Windows and Macintosh 11 computers.

The suggested list price for Videoscript is \$495, and it is available with all Windows 1 cards ordered before July 15, 1991 in the US and August 1, 1991 outside the U.S. During the period, current owners of Windows and Windows 1 cards can obtain Videoscript for \$15.

Contact: Geri Bonker, Interstate, 317-641-0955.

### Apple VP Testifies in Senate Hearing

**WASHINGTON, D.C., APR. 18 (AP)—**Apple Computer's Dr. David Dugan testified in support of pending copyright technologies legislation that provides for the creation of special radio bands for communications between computers, systems, Apple said. DataPAC.

A couple of months back, Apple Computer proposed that the FCC, as Federal Communications Commission, the federal agency which administers communications frequencies and polices their use, establish a dedicated computer communications frequency band between 1880 MHz and 1900 MHz.

Speaking before the Communications Subcommittee of the U.S. Senate Committee on Commerce, Science, and Transportation, Apple's Vice President of Advanced Technology supported Senate Bill S-1114, the Emerging Telecommunications Technologies Act of 1991.

"Apple and others in the computer industry strongly support the goal of S-1114, which is to recognize additional radio spectrum resources that the United States holds unique in an technological sense, providing economic growth and world leadership," Dugan testified. "We

have, however, a great need of spectrum regarding the need for multi access on S-1114. Passage of the legislation will be the beginning of a lengthy process to identify frequencies for allocation and sharing. This process should take time."

The major issue now confronting lawmakers at Congress would consist in a major market for other communications systems which would allow users to easily a computer with those at work but always have access to a central information system, including the DataPAC program by Alan Kay (now at the Xerox PARC) (John Allen Bennett's Center) think tank which came up with other computer ideas such as the mouse.

Apple's DataPAC would link computers in a radio network running up to 100 feet.

Although other companies have shown interest in this new technology, Apple Computer has been at the forefront of these pushing for the assignment of standards that would allow developers to begin making plans to meet the needs of the program in the future. Contact: Geri McCallister, Apple Computer, 650-424-1276.

### Apple Offers Employees Consulting Alternatives

**CUPERTINO, CALIFORNIA, APR 18 (AP)—**Taking the lead in helping to reduce the San Francisco Bay Area's choking traffic and discover pollution, Apple Computer is offering its employees a series of incentives to encourage driving the old Chevy to work.

**FUJIKAMA**  
U.S. DISTRIBUTION (INCORPORATED)  
1735, 6791 Graybar Rd., (near No. 8) Richmond, B.C. Canada V6W 1H8

Tel: 604-273-3838

Fax: 604-278-4368

Toll Free: 1-800-463-KAMA (5262)

COMPUTAX (AUTHORIZED FUJIKAMA SERVICE CENTRE)

FUJIKAMA 386-050 Computer

FUJIKAMA 386-050

FUJIKAMA 386-02

FUJIKAMA 386-020

FUJIKAMA 486-0000

Fujikama Barebone, Full Systems, Motherboards, Controller Cards, Full Bundles, & More.



Fujikama Super VGA Monitor up to 4096x Vertical Resolution

Fujikama's Special Designed Bilingual 501 Keyboard for the ONE Canadian Market

#### PRICES KEYBOARD

Components	386-020	386-020	386-020	386-020	486-000	486-000
Time to Market	100%	100%	100%	100%	100%	100%
Memory	1	1	1	1	1	1
Processor	1	1	1	1	1	1
BIOS/ROM Card	1	1	1	1	1	1
Hard Drive	100%	100%	100%	100%	100%	100%
Access Time	100%	100%	100%	100%	100%	100%
Video Card	100%	100%	100%	100%	100%	100%
Color VGA Monitor	100%	100%	100%	100%	100%	100%
Video Resolution	100%	100%	100%	100%	100%	100%
Speed of Data	100%	100%	100%	100%	100%	100%

100% Processor 1.44MB PS with 100 System purchased between May 1 - 31, 1991

All systems feature Fujikama's special engineered bilingual keyboard for Canadians. Fujikama Super VGA Monitors are IBM VGA (640x480) compatible with 15" high resolution up to 4096x vertical resolution more than most other video. Limited quantity, prices subject to change.

• 386-020 • 386-020 • 386-020 • 386-020 • 386-020 • 386-020



# COMPUMAX

An

Affordable

Solution

102-1000 WEST BROADWAY,  
VANCOUVER, B.C. V6J 1X6

731-2828

NOVELL

CUSTOMIZED SOFTWARE

MAINTENANCE UPGRADE

MULTI-USER APPLICATION

COMPUTER TRAINING

RENTAL &amp; LEASING



Setup &amp; Support Package

AUTHORIZED  
**NOVELL**  
 NETWORKING  
 ACCURATE  
**EXCELLOR**  
 BUSINESS  
 MACHINES  
**MFUJIKAWA**  
an international publishing co.

FOR  
 THE  
 FULL  
 LIST  
 OF  
 ALL  
 THE  
 SERVICES  
 WE  
 OFFER  
 PLEASE  
 CONTACT  
 US  
 AT  
 731-2828

## EXCELLOR® BUSINESS MACHINES

Leading edge in technology, powerful 560 and 680 based computers for business and engineering applications.



## MICRO TUNE-UP

- Disaster Prevention
- Optimize Hard Drive Performance
- Extend Computer Life Time
- Regular Clean-up & Maintenance

SPECIAL  
 OFFER  
**\$74.95**

### INCLUDES:

- System Vacuum
- Clean Keyboard & CPU Casing
- Clean floppy Drive Heads
- Performance Diagnostics (s)
- Memory Check, floppy Drive, Video Interface, Printer Interface, Hard Drive
- Optimize Hard Drive Performance
- Replace Internal Battery (s)

with 2nd Month  
 Private Clean-up  
 Just \$19.95 extra  
 (regular \$49.95)

Printer Diagnostics, Mouse Test on  
 Multiple Emulation, Screen Red  
 Check up, Virus Scan/Check up,  
 Disk up/Down, Service available.

## Laser Printer & Service Centre

## #1 Choice for retailer & wholesaler

COMPLEX COMPUTER SYSTEMS  
 MULTI-EXPRESS DEALER

**MULTI-EXPRESS®**  
 SOFTWARE FOR EFFICIENT OPERATIONS  
 BY STI TECHNOLOGIES INC. 712-6468

- Field of Sale
- Order/Reorder
- Inventory
- Inventory Control
- Order Management
- Order and Status
- Account Receivables
- S.E.T. Support
- Single Entry Operations
- Full Integrated System
- Real Time Update Accuracy
- Multiple Level Payment Security
- Card List on Demand
- Multi-line Capable



### SPECIAL

### COME & SEE US

### MORE SPECIALS IN RETAIL DEPARTMENT

#### COMPUTERS

Compaq 286 15MB Processor & Mouse  
 \$299.00 (incl. GST)  
 HP 286 Processor 15MB  
 \$299.00 (incl. GST)

#### Best computer hardware

diagnostic program

CHECK IT V.2 \$149.95

#### SOFTWARE

Microsoft 286 Upgrade  
 Microsoft Windows  
 MS-DOS  
 MS-Office  
 MS-Excel  
 MS-Word  
 MS-Access  
 MS-Project  
 MS-Draw  
 MS-Write  
 MS-Base  
 MS-Chart  
 MS-Form  
 MS-Report  
 MS-Table  
 MS-Tablet

#### COMPUTER SYSTEMS

Compaq 286 15MB Processor & Mouse  
 \$299.00 (incl. GST)  
 HP 286 Processor 15MB  
 \$299.00 (incl. GST)  
 MS-DOS  
 MS-Office  
 MS-Excel  
 MS-Word  
 MS-Access  
 MS-Project  
 MS-Draw  
 MS-Write  
 MS-Base  
 MS-Chart  
 MS-Form  
 MS-Report  
 MS-Table  
 MS-Tablet

#### SOFTWARE

Microsoft 286 Upgrade  
 Microsoft Windows  
 MS-DOS  
 MS-Office  
 MS-Excel  
 MS-Word  
 MS-Access  
 MS-Project  
 MS-Draw  
 MS-Write  
 MS-Base  
 MS-Chart  
 MS-Form  
 MS-Report  
 MS-Table  
 MS-Tablet

#### JOIN THE WINNING TEAM

#### JOB OPENINGS

Experienced salesperson  
 wanted. Please send resume  
 with salary expectations to our  
 Human Resources Dept.

Expanding Computer  
 Service area now 10

OVER 300 GAMES  
 20% OFF

PRICES SUBJECT TO CHANGE WITHOUT NOTICE. LIMITED QUANTITY



ting system, TOS.

That Mega I was originally expected to be strictly the same as the hard drive-equipped Mega 4 STD, means that hard drive, host adapter, mod chip and 8 megs of ram, however, dealers report that the Mega I STD case has no hard drive cover that is located so as to inhibit the installation of a hard drive.

Atari has also stated that it will offer an upgrade with either a 40 or 80 megabyte drive, host adapter, mounting rail and one hard drive enclosure. Contact: Atari Canada, 416-479-1864.

#### Atari introduces Professional Systems Group

CHICAGO, ILLINOIS, APR 12 (CTP)—From April 8-11th, Chicago's premier McCormick Place exhibition center played host to the first and largest (of computer-based publishing) has to offer in the annual Corporate Electronic Publishing Systems (CEPS) trade show. This is where others all the major players in the desktop publishing and to come out to show their hardware platforms, software, printers, even paper stock for laser printers.

Alongside such notable neighbors as KnowledgeSoft, NeXT, QMS and Xerox (who were also showing Ventura Publisher as a booth sponsor), attendees were able to see the show. Atari used the show to introduce its new Professional Publishing Group, and "Share To Print" tools for every phase of projects work from document processing and design, to photo-retouching and image-to-text

output.

Several manufacturers demonstrated new items in the Atari booth, including BDI, showing off the new color capabilities of its HighEnd Colorize 3D DTP package and the Gamma Studio, an eleven-page image-manipulation program for enhancing, retouching, and color correcting grayscale and 24-bit color images. Soft Logic, such as Postscript-based DTP solution, Pagesave 2, and Goldleaf Publishing, showing an impressive array of "note to words" services. Gamma imports for photo processing, digital lithography, laser art, DTP and page layout as well as its own Word Star II graphical word processor.

For the part, Atari brought two TT600s from Intel to complete work Space DTP: 900 color full-page documents and 32M 400 laser printers.

Contact: Goldleaf Publishing, Inc., 416-461-6552 or Atari Canada, 416-479-1864.

#### COMPUTER NEWS

##### Canadian Association Plan To Merge

TORONTO, ONTARIO, APR 10 (CTP)—All three members join the go-ahead, Canada's two largest computer industry associations will merge later this year. The Information Technology Association of Canada (ITAC) and the Canadian Association of Data, Professional Services, and Software Organizations (CADAPSO) would form a new national body representing the hardware, soft-

ware, and services sectors.

"There are really too many associations in Canada that are concerned with issues that relate to the information technology industry," said Troy Bell, president of CADAPSO. Bell told Newsbytes the merger would come later in the year as the resources were devoted between the two associations, and a stronger base for the industry.

Julius Henry, president and chief executive of ITAC, also told that view, noting that ITAC and CADAPSO have submitted several joint letters to governments on industry issues recently, and

"we do tend to have a stronger voice when it's two organizations speaking."

Although ITAC and CADAPSO have only about a dozen members as companies, Bell said, the issue between these associations has been a great deal in recent years. Hardware companies that were traditionally members of ITAC are becoming more and more concerned with software and services, and some have become associate members of CADAPSO, he said.

ITAC was formerly the Canadian Business Equipment Manufacturers' Association (CBEMA).

## LaserSet DESKTOP MEDIA

### ★ CANON Full Colour Copier

### ★ Toner Cartridge Recharge: All Major Brands of Personal

Copiers & Laser Printers

### ★ Scanning: Capable OCR

### ★ MAC Required: MAC+, MAC II, MAC SE/30

### ★ Disc Conversions: IBM → MAC

### ★ Self-Linking Stamps

### ★ Typesetting

FOR A FREE CATALOGUE  
CONTACT US, 24 HOURS  
A DAY, 7 DAYS A WEEK  
Call or Write: LaserSet  
1-800-368-8888



OPEN SATURDAY 11 AM - 6 PM

3496 Gable Street • Tel. 876-5330 / Fax 876-8819

## Portable Personal Computer

The Most Dependable Professional Laptop Computer

Powerful  
Versatile  
Simple-to-use  
Light-weight

CIM-240



4 ED-3800 Electronic Diary

Special  
Introductory  
Prices!

Quality Products From Japan C&M Corporation  
Japan Citizen Watch Group

Sole Agent:

CANADIAN UNITED INVESTMENTS INC.

366-3668, Centre Point  
Cambridge Industrial Centre  
Richmond, B.C. Canada V6V 2K4  
Tel: (604) 273-6272 Fax: (604) 273-6227



# JC&M

JAPAN

"It Means You Can Trust"

—Office Automation • Calculators • Audio • Imaging

## Portable Word Processor

100,000 Words For Spell-check  
220,000 Words For Synonym Word Finder

CIM-1099



NEWLY ARRIVED IN CANADA!  
DEALER & DISTRIBUTOR INQUIRIES WELCOME

If members approve the merger, the new group would likely have its head office in Toronto with several offices in Ottawa to handle government relations. Currently, EAC is based in Toronto, while CASAPRO has its headquarters in Ottawa. No one has been chosen for the merger body, but both parties apparently favor including the phrase "information technology" in the new name. "There have been numerous discussions on the table," Bull said, "and one of them is to keep the EAC name."

Contact: James Meyer, EAC, 405-

454715, fax 416-915-0748, Ridge Hill, CANADA, 013-290-3516.

#### Document Exchange for HP, IBM VM, LANs

CALGARY, ALBERTA, APR. 14 (ENR)—Keyword Office Technology has begun shipping new versions of its document interchange software for Windows, PC-based microcomputers running the HPF and HP-UX operating systems. With assistance running VM, multi-volume networks. Earlier versions of Keyword ran on Unix and Digital Equipment Systems.

The Keyword software allows documents created with more than 40 different word processors to be exchanged without losing formatting information. The software integrates word processing and word and keeps track of user profiles to ensure documents are delivered in the right format, a Keyword spokesman said.

Keyword HP-UX, HP-ALX and Windows versions all handle PostScript-format computers. Keyword IBM VM, also available for IBM systems using the proprietary VM operating system, can be integrated with IBM's Professional Office System (PROPS) or OfficeVision, the company added.

Keyword LAN works with a variety of document and graphics in a local-area network. James Park, sales and marketing coordinator for Keyword, said that the new version provides both some functions missing in Keyword-based networks like Network Connect electronic mail software but just, but will work with other IBM-based systems. Microsoft-based Connectware Software of Vancouver, maker of Network Connect, makes this year. The handling agreement remains in place, he said. Keyword.

Park added that Keyword has a co-operative software partnership agreement with IBM Canada, and hopes to develop marketing agreements with both IBM and Hewlett-Packard, as it did last year with Digital.

Contact: James Park, Keyword Office Technology, 405-294-1773, fax 405-294-1594.

#### CONTROVERSIAL

#### Connectors Ready to Roll Out CDTV

Scarboro, B.C., APRIL 13 (TCP)—Communication Canada is set to begin shipping its home multimedia computer (CDTV) May 1991. The CD-ROM-based CDTV will look like an audio compact disc player and connect to a television set and laser video system. However, it has the processing power of an image computer, and can be upgraded with a flat keyboard, mouse, trackball, modems, drives. Many CDTV software titles will be available within a couple weeks of its introduction, with others to 1991 due by late summer.

The suggested retail price will be \$1,199.95. Connect, Business Systems Corporation Business Machines (416) 421-4407.

#### The Desktop Video Video

MILL VALLEY, CALIFORNIA, APR. 12 (ENR)—Joe Lebeck of Communications Bridge has released "The Desktop Video Video," an Eloquent production costing \$100 which covers all the latest developments in this rapidly-changing field.

"Desktop systems are becoming available where production tools at the professional level," he told Videomakers. "They're now capable of functions that used to cost hundreds of thousands of dollars. That's shocking news in a way, isn't it? It just happened in the last year." And Technologies produces the book.

## RECHARGE YOUR LASER OR PC CARTRIDGES

Stop Throwing Money Away

HP or PC Laser Cartridges

recharged  
\$59.95 each

IBM 4219 recharged  
\$59.95 each



Inquire about our FREE  
maintenance program  
for your HP Laser Printer

Save "The Inkman's" Doctor

Call 844-0261 For FAST SERVICE  
ANYTIME

Free Pickup and Delivery or Drop Off At

ANYWHERE IN THE GTA. Service 416-731-1234. Locations across from Canadian Tire

# Reliable 486 33MHz is here! ISA & EISA

Being used by BC Hydro, TRIUMF,  
Westcoast Energy, etc.

#### BYTEWELL 286 AT

80386, 80387, 0.175, 128K ram, 800K or less, 1.2MB floppy drive, 286 AT case, 286 AT keyboard, 17" monochrome monitor

System Price:

**\$850**

Sub 16 MB VGA Card and 14" VGA Color Monitor add \$480. 41mm add \$220

#### BYTEWELL 386SX

80386SX, 80387, 0.175, 128K ram, 800K or less, 1.2MB floppy drive, 386SX AT case, 386SX AT keyboard, 17" monochrome monitor

System Price:

**\$1188**

Sub 16 MB VGA Card and 14" VGA Color Monitor add \$480. 41mm add \$220

#### BYTEWELL 386/25

80386, 80387, 0.175, 128K ram, 800K or less, 1.2MB floppy drive, 386 AT case, 386 AT keyboard, 17" monochrome monitor

System Price:

**\$1539**

Sub 16 MB VGA Card and 14" VGA Color Monitor add \$480. 41mm add \$220

#### BYTEWELL 486/25

80486, 80387, 0.175, 128K ram, 800K or less, 1.2MB floppy drive, 486 AT case, 486 AT keyboard, 17" monochrome monitor

System Price:

**\$2699**

Sub 16 MB VGA Card and 14" VGA Color Monitor add \$480. 41mm add \$220

#### MULTITERM MT-286 AT

80386, 80387, 0.175, 128K RAM, 800K or less, 1.2MB floppy drive, 286 AT case, 286 AT keyboard, 17" monochrome monitor, 14" Monochrome Monitor, MS-DOS 4.01 & GW-Basic

System Price: **\$1199**

1985 & 1986 386 VISA 14" Color add \$420

#### MULTITERM MT-386/25

80386, 80387, 0.175, 128K RAM, 800K or less, 1.2MB floppy drive, 386 AT case, 386 AT keyboard, 17" monochrome monitor, 14" Monochrome Monitor, MS-DOS 4.01 & GW-Basic

System Price: **\$1899**

1985 & 1986 386 VISA 14" Color add \$420

#### MULTITERM MT-386SX

80386SX, 80387, 0.175, 128K RAM, 800K or less, 1.2MB floppy drive, 386SX AT case, 386SX AT keyboard, 17" monochrome monitor, 14" Monochrome Monitor, MS-DOS 4.01 & GW-Basic

System Price: **\$1499**

1985 & 1986 386 VISA 14" Color add \$420

#### MULTITERM MT-486/25 ISA

80486, 80387, 0.175, 128K RAM, 800K or less, 1.2MB floppy drive, 486 AT case, 486 AT keyboard, 17" monochrome monitor, 14" Monochrome Monitor, MS-DOS 4.01 & GW-Basic

System Price: **\$3770**

1985 & 1986 486 VISA 14" Color add \$420

ONE YEAR WARRANTY, TWO YEAR PARTS AND MULTITERM SUPPORT, ONE YEAR ON MONITOR

## DPE COMPUTERS (Since 1983)

779 Monro St., Vancouver, B.C. V6B 2M1

Tel: 504-583-7827 Fax: 504-583-8218

Multiterm is a registered trademark of DPE Electronics Canada Ltd.

selling high-end systems right now, the Apple II. Media Computers, but a competition is coming from Europe where the DMG, Video FX, and the EtoDraw.

EtoDraw, from Lacrafina, is being introduced at the National Association of Broadcasters show. Jack "Tom Hanks" Hanks' equipment may cost hundreds of thousands of dollars. Leiford is leery, edged, but goes on selling rapidly, and they compete with top-priced packages which may cost \$1 million or more. Video compression will help bring these systems into lower price ranges, he added.

At the low end, he said, the Nintendo Video Tronics is bringing many people to the Commodore Amiga. "All the effects in my video were done with the Tronics," he said on A200, but it seems the picture is real. "Leiford says a new video by Todd Rundgren also used the Tronics." The Tronics has a lot of software, and he got amazingly no criticism. Leiford says of the new product.

The problem for desktop video, however, is that video dealers are not yet comfortable with it. Leiford's video store is selling the product. "One of the purposes of this video is to support dealers elsewhere. There are no established relationships with dealers. You can go to video stores and buy video, and a computer store for computer equipment, but the people know how to put it together."

Some professional video dealers and computer dealers are joining together to sell video in the U.S. but Leiford says, "If you look at the presentation on 40 years ago, you used to have a choice between video and overheads on the (overhead or full-blown professional video) at the high-end. There is now a broad middle ground between the two. . . . Edus and Hi-End and Hi-End 2/4 inch tape. You can do effects with an ADO or a Tronics or a Quantum Hawk. There are solutions that speak to each unit. That's what we're helping people sort out. It compares the situation to paint production, where a single type can be created on a laser printer or a magazine use either a black production, depending on how much the user is willing to pay."

To learn the Desktop Video Video, call 602-940-5698. Spinnaker support to produce the video came from Amsterdam, Microcentric, PSC Technology and Son.

Contact: Jon Leiford, Communications Bridge, 402-983-5512

## GENERAL

### Strip 2 Images Now Available On CD-ROM

SCOTT VALLEY, CALIFORNIA, APR 17 (UPI)—Meridian Data is now shipping a \$495 CD-ROM containing more than 120 Government Range Image Processing Software (GRIPS) images obtained from NASA, the Jet Propulsion Laboratory, the National Center for Supercomputing Applications, and the U.S. Navy Topographic Laboratories.

The ISO 9660-compatible CD-ROM contains government-grade satellite images of topography, geology, and weather patterns ranging from the Alaskan Halibut glacier, North American coast during the April 17 1982, and images

produced by the Voyager 2 space mission.

The 140MB of images can be accessed on PC, Macintosh, or VAX computers. Meridian Data is a major supplier of CD-ROM publishing systems and also publishes data discs such as the GRIPS series.

Contact: Meridian Data, 408-434-0000, ext. 400-434-0000.

### Motorola Introduces New Low-cost Chip Line

AUSTIN, TEXAS, APR 16 (UPI)—Motorola has announced a new line of low-cost embedded control microprocessors intended for applications such as laptop and printer-computer interface products, where microcontrollers are especially important.

The new line of 16-bit chips is based on Motorola's venerable 68000 microprocessor and offers four different models with varying performance capabilities, according to a Motorola press release.

Jim Randhart, marketing manager for Motorola's 68000 family, predicts that within five years Motorola will have a three-chip product line less than a dollar, and another that executes at more than 100 million instructions per second (MIPS).

In order to maintain the same low-cost chip Motorola said it stepped away from conventional line from the 68000, 68010, 68015 and 68016 processors, which are still in the Apple line of computers. The new chips will range from \$2.95 each to quantities of 10,000 or \$1.95 each for the most powerful version of the family.

Contact: Jim Randhart, Motorola, 512-328-0000.

### Spinnaker Buys Plus Developer Cambridge, Massachusetts

APR 17 (UPI)—Spinnaker Software has bought a small software of Cambridge, West Germany, the developer of Spinnaker's Plus hypertext development software. The design Spinnaker worldwide marketing rights to Plus, including the European market.

In September 1990, Spinnaker Software obtained marketing and distribution rights for Plus in North America and Japan. Plus comes in both MS-DOS and Apple Macintosh versions.

The company said that control of the Plus software will let it develop the package's functions and extend new features. Spinnaker also said it is establishing an international organization to further develop the market for Plus.

Ron Goldstein, chief financial officer at Spinnaker, told Newsbytes that the purchase gives his company an immediate presence in Europe. Spinnaker plans to relocate Forest's development expenses in Germany and reuse the company's employees, he added.

Terms of the deal call for Spinnaker to pay Forest Software USA \$1 million in cash and future deferred payments.

Spinnaker obtained bridge financing for the transaction through a term loan agreement with Phoenix Corp., an affiliate of Howard Milstein's company and a major Spinnaker stockholder.

Contact: Ron Goldstein, Spinnaker, 617-494-1200 ext. 170; Michael Ryan, Spinnaker, 617-494-1200 ext. 215.

## SUPERIOR LASER SUPPLY

Your Recharge Specialists

## Protect Your Investment!

Preventive Maintenance cleaning and 21 point inspection

- complete disassembly of Laser Printer
- all components are removed, inspected and cleaned
- moving parts lubricated
- main fuser inspected
- much, much more



**\$119.00**

\*Best service  
in the business

CALL TODAY

Quality Workmanship Performed with Pride and Integrity by Factory Trained Technicians

## Call for the best prices on new Laser Printers and accessories

We sell HP, IBM, and other leading LaserJet, PostScript, LaserJet, and other LaserJet systems.

Is your laser printer fast or sluggish? We'll replace the entire printer for less than \$120.00.

\* Pickup and delivery if you like. Printer is available at a national call.

**942-5512**

\* Prepay in Cash, by money order, or by credit card.

## #1 IN CUSTOMER SERVICE

COMPLETE SYSTEMS, PARTS & ACCESSORIES  
FULL SERVICE DEPT. & SYSTEM UPGRADES/REPAIR

### ACT-486/25MHz-128K Cache/100MB System

4MB RAM on board/1.2MB Floppy or 1.44MB Floppy

Serial/Parallel/Game Port - 101 Keyboard

MS-DOS Card/14" Monochrome Monitor \$2,699

ACT-486/33MHz-2 - 128K Cache System Add \$400

### ACT-386/33MHz-64K Cache System

\$1,749

### ACT-386/25MHz System

\$1,549

### ACT-386/8K System (25MHz in Option)

\$1,299

### ACT-486/12MHz System (16MHz in Option)

\$799

### ACT-Turbo/XT - 10MHz System (16MHz in Option)

\$599

486 RAM - 512K Floppy - MS-DOS 3.11 Monitor

### Above 386/25MHz System Configuration

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

101 Keyboard

## WE UPGRADE & REPAIR YOUR PC

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

## MONTHLY SPECIAL

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

Call for a free estimate

**IQ COMPUTERS SERVICES**  
**985-6735**

1881 Roberts Rd.  
North Vancouver, B.C.

Call for a free estimate



### Compaq Unveils New Prices, Monitor

HOUSTON, TEXAS, APR. 15 (NS)—In an apparent move to stay ahead of competitors with the rapidly falling prices of PCs, Compaq has announced prior reductions of eight to 14 percent on its PC systems, and up to 16 percent on certain hardware options.

The premium color monitor also incorporated a new pricing structure that its authorized dealers, calling dealers direct on cheaper items. The firm also is negotiating line offers, "low-volume" discounts.

Examples of the new prices include the Compaq LTE 386/33 Model 30 reduced from \$9,499 to \$4,799, the Model 50 reduced from \$9,000 to \$4,799, and the Deskpro 386/33 now starting at \$1,299.

"We believe that our new pricing profile will make Compaq products more competitive in the North American marketplace and will lead to increased sales of CPUs, as well as software and peripherals for desktop," said Ross Gentry, senior president for North American operations. "Customers continue to prefer purchasing PCs through the dealer channel. The changes implemented today more effectively reflect and support customer purchasing patterns in North America."

Meanwhile, Compaq's new \$799 24-inch reduced-emission VGA monitor is touted as complying with the emission standards set by the Swedish national board for environmental and testing. Compaq also announced that its video graphics adapter-board monitor now complies with the same guidelines.

Contact: John Sweeney, Compaq, 713-576-6464, fax (713) 574-6455.

### IBM Plays April Fool's Joke on itself

SYDNEY, AUSTRALIA, 1991 APR. 9 (NS)—As a denouement over the work, IBM in Australia produces top-level corporate brochures and reports. The latest IBM quarterly review, however, had as subject "Business automation gone on IBM."

A lead article in the quarterly review predicted IBM's compatibility with one of Australia's leading banks—ANZ. The bank's chief, Brian Weeks, was interviewed, and talked of his bank's very large dealings with IBM, including the ground-breaking installation of an IBM 486i supermainframe system. The article had a nice color picture of Brian Weeks in his crisp, efficient office, surrounded with old painting on the wall and Apple Macintosh on the desk. And if that weren't bad enough, the IBM paper is posing with his Macintosh screen as blank.

### PC Users Get The Best

SAN FRANCISCO, CALIFORNIA, APR. 17 (NS)—Joe Software has introduced an interactive music education program called Rhythmania. The software is designed for teaching to intermediate levels of rhythm, tracing out all five a number of different exercise modes.

The areas covered by the program include tempo, meter, rhythm, drill, notation values, note applications, mixed meters, and different levels of difficulty. Typically, a user's response is heard instantly,

and the user plays back the rhythmic notation that is sent to the screen.

After three input exercises the user sees the computer keyboard, a Musical Instructional Digital Instrument (MIDI) instrument, or any IBM, Logitech, or Microsoft compatible mouse.

Although there is no Internet-based experience, and is recommended when using Rhythmania, this program is designed to use the internal speakers of the microcomputer it is being run on. Recommended system is 800 MHz, and minimum 640 kilobytes of RAM, DOS 3.0 or higher, at least one floppy drive, and VGA, VGA, VGA, or a Hercules/monochrome monitor.

Contact: Cindy Rios, Joe Software, 414-544-1817.

### Graphics Package Set To Debut

OTTAWA, ONTARIO, APR. 18 (NS)—A Canadian startup will be showing a new graphics package at the COMDEX/Spring and PC Expo shows this spring that it claims offers better integration of drawing, drawing, and text dissemination, and printing features. Graphicsway will be available for plus DOS systems at the end of April and for Windows late May, according to Thomas Software.

Peter Thier, vice-president of Thomas, told Newsbytes that Graphicsway makes other packages at letting users work with charts and graphs, drawings, and text all at once. Features graphics such as text and line graphs can be combined with drawings up and down the same document, he said, and the software work search the same way whatever the user is doing.

"I think the big advantage of our product is that you don't have to leave the presentation screen as you do the work and as you make the changes," he said.

A version of Graphicsway for QDOS, a Unix variant from Compaq-based Quantum Software, is already available. Graphicsway plans to ship the DOS version, April 30 and the Windows version May 10. To begin with, the company will sell the software directly, before it must build demand to get distributors interested.

The DOS and Windows versions will cost US\$495 per copy, with volume discounts available. Thomas is also offering developer versions at \$1,995 and a runtime version at US\$149 for developers who want to embed Graphicsway in their own applications. The QDOS version costs US\$1,000, with the run-time version priced at US\$299 and the developer version at US\$999. There are discounts for next-work versions.

Contact: Peter Thier, Thomas, 613-225-5417, fax 613-225-5455.

### Delrina Expanding Support And Training, Ships New Tools

TORONTO, ONTARIO, APR. 17 (NS)—Significant software integration of its Performance Pro Series software under other applications, Delrina Technology has announced Performance Pro Data Merge software, a developer's kit, a training program, and plans for a combined support/training. Delrina also plans to allow users to run existing Windows 3.11 in Post form format.

"Our technology is such that it can

## Rossi, DeGroot & Associates

### COMPUTER TRAINING

#### Vancouver's High Quality Training Centre!

- Quality Instruction • Premium Courseware
- PC, VAX & Network Training • Custom Programming
- UNIX System Administration

#### COURSE SCHEDULE

	MAY	JUNE
Letter 120 Level I	May 4, 12, 20	June 4, 11, 25
Letter 120 Level II	May 1, 30	June 18, 27
Letter 120 Level III	May 8	June 27
WordPerfect Level I	May 4, 11, 27	June 10, 23, 28
WordPerfect Level II	May 17, 24	June 14, 24
WordPerfect Graphics	May 31	June 27
DOS Level I	May 7, 29	June 4, 14
DOS Advanced	May 14	June 11
Microsoft Word 6 Level I	May 2	June 7
Microsoft Word 6 Level II	May 29	June 17
Excel for Windows	May 7	June 25
Mathematical Modeling	May 28	June 11
Algebra (V Level)	May 20	June 7
Calculus Level I	May 12	June 26
Statistics (V Level I)	May 1	June 4
Microsoft Graphics	May 11	June 19
PC Overview	May 24	June 6
<b>NATURAL BEHAVIOR</b>		
Letter 120 Level I	May 11	June 1, 22
WordPerfect Level I	May 19	June 4, 29
DOS Level I	May 4, 26	June 19



Register Now!  
**683-0020**

Located at 650 W. Georgia (Scotia Tower)

## Recycled Office Products Program

Typewriter Ribbons...

Computer Ribbons...

Laser Cartridges...

Copier Cartridges...

Save Money!!

100 % Guaranteed

Save the Environment

**Calcon Products 261-6477**





crediting, a licensed, \$189 U.S. accounting program for Windows 4 business users.

Simply Accounting is intended for small business users and is the latest of a family of ACCPAC programs ranging from the \$109 Midsize ACCPAC Refund to the more advanced \$599 ACCPAC BPE Accounting, and the mobile ACCPAC Plus with user and designed in 1993.

ACCPAC Simply Accounting is the significant desktop computerized accounting package for small business users or as a graphical interface upgrade for users of ACCPAC Refund.

A transaction utility will convert all ACCPAC Refund files to ACCPAC Simply Accounting and the new program will be offered in Refund format at a \$99 discount.

Contact: Benton Bros. Computer Associates, 808-933-0315

**Microsoft Apple War Widens**  
REDMOND, WASHINGTON, APR. 19 (NS)—Microsoft has announced that it has learned that Apple intends to submit its copyright infringement lawsuit to arbitrate Windows 3.0.

The suit, originally filed in March 1989 and also including Hewlett-Packard as a defendant, alleged that Microsoft's Windows 3.0 (as well as Windows 2.0) had "copied" code from Apple's Macintosh, infringing Apple's copyright in two different ways: by copying the Macintosh user interface.

Apple's intention, to submit the suit

to arbitrate Windows 3.0 was disclosed in a phone call from Apple's general counsel, a Microsoft spokesman announced.

"We are curious as to why Apple chose to add Windows 3.0 to the lawsuit in the first place," said William H. Neukom, Microsoft vice president for legal affairs. "Apple appears to be having some real trouble when it comes to proving that the user has been limited to only 30 alleged similarities between Windows 3.0 and the Apple system software."

Since the original filing of the lawsuit, Microsoft has maintained that it has not infringed on Apple's copyright. Apple, meanwhile, is not commenting on Microsoft's claim, except to say that "all decisions made by Windows 3.0 are its own."

Contact: Mary Trencher, Microsoft, 206-692-8080

### FTC Widens Microsoft Investigation

WASHINGTON, APR. 19 (NS)—Microsoft Corporation was the wall of the FTC (Federal Trade Commission) has decided to expand the scope of its investigation of the company. The investigation is based on third-party charges that the giant software firm is monopolizing the market for operating systems, operating environments, computer software and computer peripherals for personal computers.

Until now, the focus of the investigation had been an agreement between

Microsoft and IBM dating back to November of 1985 which discussed future decisions of OS/2 and Microsoft Windows. The FTC, which investigates antitrust and restraint of trade cases, is apparently unconvinced whether Microsoft was anticompetitively restricting the functionality and features of future versions of Windows.

At the time, Microsoft had been going to considerable lengths to reassure software developers and customers of the upcoming release of Windows 3 that there was still a future for OS/2, and indicated that OS/2 would remain in the control of users and upgrade workstation market. Presumably, the FTC said that as a company to protect the growth of Windows. At the time, however, the announcement was not greeted with any surprise, since Windows is still based on DOS, and DOS cannot offer the same kind of future to be threatened as OS/2.

"Microsoft is surprised and disappointed that the inquiry has been broadened," said Microsoft vice president, William H. Neukom, the firm's legal counsel. "We will continue to cooperate with the investigation. We believe that Microsoft has acted as a legal and ethical company."

Contact: Mary Trencher, Microsoft, 206-692-8080

**IBM Briefs Test OS2**  
NEW YORK, NEW YORK, APR. 19 (NS)—IBM previewed the general OS/2 in the face of anticipated Windows

workshop, IBM a gathering customers, software developers, analysts, and reports this week for a series of highlights on the operating system's future.

A key part of IBM's message is OS/2 3.0, the 32-bit version of the operating system due to be shown within the next few months. James C. Casanova, IBM vice president and general manager of personal systems, called it "a better DOS than DOS and a better Windows than Windows."

IBM President Jack Sautter, addressing a gathering of IBM dealers in Las Vegas Monday said, "The secret for OS/2 is the marketplace remains as large as ever. Quite simply, our customers need an operating system that will enable them to invest confidently in their future applications. OS/2 continues to be IBM's longest-term strategy."

IBM will test OS/2 as an "integrating solution" that, in the future, will be able to run applications written for DOS and Windows, as well as those designed expressly for OS/2, at once as a single installation.

Since IBM executives are working with customers, independent software vendors, consultants, financial analysts and the press to address a wide range of hardware and software topics. At the same time, PC manufacturers and independent software vendors will talk about current and future OS/2 projects. Contact: Joseph A. O'Hara, IBM, 514-444-4444



# PHASE 1 SYSTEMS CORPORATION

## Bare Bone Systems

### U.S.A. MADE BOARDS!!

100% Lithium Polymer (Lead) 1.5 Amps - 1.0 Amp  
100% Lithium Polymer (Lead) 1.5 Amps - 1.0 Amp  
100% Lithium Polymer (Lead) 1.5 Amps - 1.0 Amp

244-2444	\$179
244-2444	\$179
244-2444	\$179
244-2444	\$179
244-2444	\$179
244-2444	\$179

## Complete System Packages

100% Lithium Polymer (Lead) 1.5 Amps - 1.0 Amp  
100% Lithium Polymer (Lead) 1.5 Amps - 1.0 Amp  
100% Lithium Polymer (Lead) 1.5 Amps - 1.0 Amp

244-2444	\$179
244-2444	\$179
244-2444	\$179
244-2444	\$179
244-2444	\$179
244-2444	\$179

## MONITORS

Color 15" Flat Panel	\$199
Color 15" Flat Panel	\$199
Color 15" Flat Panel	\$199
Color 15" Flat Panel	\$199

## Video Cards

Cardtek 1000 Series	\$199
Cardtek 1000 Series	\$199
Cardtek 1000 Series	\$199
Cardtek 1000 Series	\$199

## OTHER CONFIGURATIONS AVAILABLE ON REQUEST

Hard Drives	Accessories	Math Cores
Seagate 1000 Series	1000 Series	1000 Series
Seagate 1000 Series	1000 Series	1000 Series
Seagate 1000 Series	1000 Series	1000 Series
Seagate 1000 Series	1000 Series	1000 Series
Seagate 1000 Series	1000 Series	1000 Series
Seagate 1000 Series	1000 Series	1000 Series

### IBM Pups Up OS/2 With New Prices, Promos

NEW YORK, NEW YORK, APR. 18 (NY)—In hopes of creating pricing value from its available to their diskward OS/2 users unwilling to upgrade, IBM is offering new pricing and promotional offers on OS/2.

The price of a one-user license for the OS/2 1.3 Standard Edition (SE), formerly \$248, will be \$150. OS/2 1.3 Enhanced Edition (EE), formerly \$490, will be \$300. IBM OS/2 users can upgrade to OS/2 SE 1.3 for \$99 and OS/2 EE for \$200.

James A. Connerman, IBM vice president-product manager, Personal Systems, put it this way: "If the program and pricing associated with IBM's compatibility can entice OS/2 customers toward our intention to bring OS/2 advanced technology to a wider audience of end users, we cannot industry trends continue and customers migrate to MS-DOS-based systems and higher, IBM OS/2 represents an opportunity to replace the hardware's capabilities through its high performance and software compatibility."

In other promotional offers, from April 17 to Dec. 31, OEM customers may acquire OS/2 1.3 for \$99 and anywhere their IBM license. Customers who purchase OS/2 SE and EE 1.3 between April 17 and Dec. 31 will be eligible to upgrade to OS/2 1.3 Enhanced at no charge. There will also be an upgrade promotion for OS/2 1.3 available to customers who purchased OS/2 SE or EE before April 17.

Contact Tracy A. O'Neil, IBM Corporation, 914-945-5412.

### IBM Says It Won't Kill DisplayWriter

WASHINGTON, D.C., APR. 18 (NY)—Unfazed by some analysts that IBM will drop its longtime word processor DisplayWriter in favor of a new program being developed by Lotus, IBM has renewed a development agreement with Lotus for a new word processor to be marketed by IBM.

A spokeswoman tells Newsbytes that IBM has not announced that DisplayWriter will be discontinued, but explains that the product will continue to be supported and enhanced.

Industry observers point out that, since IBM is apparently getting a new, much faster word processor, it would only be logical if the new program were available to replace the DisplayWriter. DisplayWriter which runs IBM's software, which is not currently, recently told Newsbytes was "the last software software" it had ever used.

One editor of a major computer magazine told Newsbytes that he had also heard that DisplayWriter was being replaced but that there was no definite program interest in DisplayWriter that was "I couldn't tell me personally."

IBM's DisplayWriter was one of the earliest word processors, starting life as a dedicated system, but has failed to keep up with industry trends. Some analysts, according to Computerworld, say IBM's share of the word processor market, compared to well over 30 percent for WordPerfect.

While Lotus is a major, long-established word processor, it is currently very difficult to learn, the state change located at the less advanced DisplayWriter. The new program will reportedly run as either a graphical or text mode.

Lotus' new product is similar to WordPerfect, it will be an "enhanced" word processor, a very powerful tool that those who need to extensively format or edit documents, such as which have used Lotus' word processing of a standard publishing office.

### Borland Offers ObjectWindows as a Standard

SCOTT'S VALLEY, CALIFORNIA, APR. 18 (NY)—Borland announced it has given ObjectWindows, a software interface designed to make programming in Microsoft Windows easier, to the standards group for Windows programming, the Object Management Group (OMG). The OMG is a non-profit group currently working on Windows industry standards with a 100 major industry companies including, according to Microsoft, Borland-Parade, AT&T, Philips, and Sun.

The focus of the OMG is to help maximize the portability, reusability, and interoperability of computer software. The ObjectWindows specification has been presented to the OMG's special interest group on these issues.

Although Windows has become popular among end users, software developers find that programming for Windows without the use of object-oriented tools is extremely complex. By using ObjectWindows, developers can

"inherit" the fundamental architecture of a Windows program and then reduce the amount of code needed to write Windows applications. Borland said.

Contact Jim Adams, Borland, TEL: 408/450-1800, FAX: 408/450-0540, telex: 5400, Object Management Group, TEL: 303/444-8328, FAX: 303/444-1752.

### Lotus Increases Sales, Decreases Earnings

CAMBRIDGE, MASSACHUSETTS, APR. 18 (NY)— Lotus Development Corp. has reported net sales of \$174.4 million in 1991's first quarter, a 3 percent increase over sales of \$168.5 million in the comparable 1990 period. Net income totaled \$1.8 million, or 15 cents per share, a 51 percent decrease from \$3.6 million, or 30 cents per share, in the previous year's corresponding quarter.

During the first quarter, Lotus acquired a subsidiary, a privately held, Mountain View, Calif.-based firm specializing in local area network development services, sold Lotus Publishing Corporation to International Data Corporation and agreed to start over the marketing and development of a new Lotus business and education program, Lotus Express, to MCI International.

In the measurement of the sales and earnings, Lotus also called attention to the fact that, during the quarter, it signed a marketing and development agreement with Lotus Packard to make their Lotus 1-2-3 available on third-party Packard workstations and shipped Lotus and Transient versions of 1-2-3.

### Network Support & Upgrades

We can handle any size of network.

No job is too big



### AE ELECTRONICS CORPORATION

#4-11480 Voyager Way  
Richmond, B.C. V6X 3E1  
Tel. 279-8867 Fax. 279-8821

### Lenient Networking and Support

We can link 2 to 300 computers together at a reasonable price.

No job is too small

#### SPECIAL OF THE MONTH

HP Laser III \$2049	
HP Printing Card & Ink	\$179
HP Laser III 1000 x 1000	\$179
HP Laser III 1000 x 1000	\$179
HP Laser III 1000 x 1000	\$179
HP Laser III 1000 x 1000	\$179
HP Laser III 1000 x 1000	\$179
HP Laser III 1000 x 1000	\$179
HP Laser III 1000 x 1000	\$179
HP Laser III 1000 x 1000	\$179
HP Laser III 1000 x 1000	\$179

**ALL SYSTEMS INCLUDE:**  
41MB, Voice call, Microsoft HD  
1.1 MBHD hard-disk Controller  
1.5 or 1.44MB Read Floppy Drive  
3000x100, 1MB RAM, RAM 1000  
12" Monitors Monitor & Graphics Card  
Serial, Parallel & Game Port  
Fujitsu 101 key enhanced keyboard

**Warranty is 1 year parts & two years labour**

#### UPGRADE OPTIONS

41MB Voice call HD	\$29
Tracer Case	\$29
OS/2 4.0	\$29
1.44MB or 1.1 MB FD	\$79
InterCase 2400 cd monitor	\$29
InterCase 2400 cd monitor	\$79
OS/2 Master 1000 x 1000	\$129
100 MB voice call HD	\$249
VGA Standard 640x480	\$219
VGA Color 640x480	\$249
Microsoft Mouse	\$129

**Special**  
**286-12MHz**  
Expandable to 4 MB  
(Exp. RAM \$45/MB)

**\$850.00**

**Starter Special**  
**386SX-16MHz**  
Runs all latest Software  
Expandable to 4 MB  
(Exp. RAM \$65/MB)

**\$1125.00**

**Business Class**  
**386DX-25MHz**  
25MHz Chip set  
Expandable to 8 MB  
(Exp. RAM \$65/MB)

**\$1499.00**

**Professional System**  
**386-33MHz**  
64K Cache  
Baby size board  
Expandable to 8 MB

**\$1750.00**





### Chordable Systems Shown At Lap & Palmtop Show

NEW YORK, NEW YORK, APR. 17 (NY)—Three firms exhibiting at the Lap & Palmtop '91 Show held at New York City's Sheraton Center on April 16 & 17 demonstrated products built around a system of data input called "Chording."

Chording is a system of typing using various key combinations on a small number of keys to generate all of the characters normally generated by a standard 101-key keyboard.

Chording technology was demonstrated by Lologap, whose "LoT" protocol they've designed to make the ergonomic strain out of desktop computers, and by Microvision who uses a 16-key system to allow a very small key board on an IBM compatible "Agenda" computer. The LoT, which does not contain any standard keys, may be used in conjunction with a standard desktop computer keyboard, while the Agenda contains full alpha numeric keys in addition to the chording keys.

A third firm, Select Tech Incorporated, demonstrated a prototype of its "Wolfshead" Chordable Computer. The system is a combination of either the LoT or its Agenda with a miniature hand-held-mounted monitor called the "Private Eye" and a miniature IBM or MS-DOS carrier over the shoulder. Douglas Pines, president of Select Tech, told Newsbytes that his company's production version of the system is to be shipping in the summer of 1991.

Commenting on the reasons underlying the development of the Wolfshead, Pines told Newsbytes "In a pay phone an expensive color laptop is useless. The Wolfshead will allow people to function normally while still running Lotus 1-2-3, WordPerfect, or other MS-DOS software."

Pines also commented on the impact of chording, telling Newsbytes "Chording can be learned very rapidly and, with proper training, can be very productive. Members of the three original firms have received 40-140 hour training sessions and a number of the group are entering information at a rate that translates into 150 words per minute typing!"

"When people can learn chording they enjoy it not least and at the same time accelerate their typing speed," Industry's Band added.

The Agenda has peripheral equipment for connection to either a Macintosh or MS-DOS computer for data exchange. Other peripherals such as fast modems are available. Doug Green, CIO director of sales for Microvision, told Newsbytes that when the product, originally developed in England, comes to market in the United States, it will be under a different name.

Green told Newsbytes that the ongoing use of the name "Agenda" by Lotus Development Corporation demands the name change necessary.

Green: Wolf Road, Lologap, 244-2501; Douglas Pines, Select Tech Inc. 212-547-9776; Doug Green, Microvision, 910-876-4240.

### IBM Stirrs up Portable Market

NEW YORK, NEW YORK, APR. 17 (NY)—IBM's entry into portable with the Model PS/1 486C, and the release of the PS/1A NOTE printing in Japan,

sent ripples through the market that the value of laptops will fall. Maybe this is Charles Latta, but the first company was the Compaq SLT 286, which took a \$400 hit in sales in 1990. While its sales may mean for Long-Touch, the Toucha provides here no more any less security. It remains to be seen whether IBM's computer will be the market that comes to be owned by "business" portable and laptop manufacturers.

### Papet PC Comes With Free Lotus 1-2-3

SANTA CLARA, CALIFORNIA, APR. 12 (NY)—Papet Computer will continue its appeal to the business crowd by launching the world's most popular spreadsheet package with its new personal computer. Papet has announced that a free copy of Lotus 1-2-3 Release 3.1 will be given away with each new purchase of the SLT300 Papet PC. The software is available to all merchandise purchased through Papet dealers from April 12 to June 30.

The Papet PC is a compacted portable personal computer powered by two 33-MHz silicon processors. It comes with an 80-character by 25-line display, a 75-key keyboard and 145-DOS 3.1. Programs and data storage is provided by two card drives and 1 megabyte of hard drive and an floppy drive.

Papet Computer Corp., founded in 1988, is a member of the PAPA family of computers, and is primarily held by its founders, employees and Future Ltd.

Contact: Mark Schuch, Ketchum, Public Relations, 408-747-1000.

CTX

DISPLAY MONITORS

PICTURE  
PERFECT

CTX

Available exclusively from

COMTEX

COMTEX

MICRO SYSTEMS INC.

Unit #10-02701 Bayview place  
Richmond, B.C. Canada V6V 2G8  
Telephone: (604) 275-6216 Fax: (604) 275-6116  
Toll-free Fax: 1-800-852-0261

Calgary Warehouse:

Bay #7 3218 - 25th St. N.E. Calgary, Alberta  
Telephone: (403) 250-0268 Fax: (403) 250-0262













**Why Pay More  
Elsewhere  
for 100%  
Same  
Compu-Ware 21**

## BUYER'S GUIDE



***A typical micro-computer is not a "MAGIC BOX", just configured by some name brand pre-built devices, as:***

Check the computer form inside out, part by part,  
as long as they're the same model/brand.  
**WHY SPEND MUCH MORE**  
for just a fancier name plate on the front panel of the  
computer case??

Don't let the fancy name plate fool you.  
make your decision and -  
**MINIMIZE YOUR COST FOR COMPUTERIZING**

200/12 MHz AT  
System  
**\$749**

**3.583x16MHz  
System  
\$1099**

**SYSTEMS**  
**1-800-441-9999**

**System  
\$14.79**

**\$1639**

101 2000-01 102 2001-02 103 2002-03 104 2003-04 105 2004-05

- 4MB RAM (expandable)
- 1.2MB/5.25" 5 $\frac{1}{4}$ " Teac Floppy Disk Drive
- 40 MB/288000 5 $\frac{1}{4}$ " 40-bit FPM Controller
- 40 Card with 1 Parallel/1 Serial/1 Game Port
- High-Resolution 12" Amber TTL Monitor
- Small Footprint Case/200W power supply
- Enhanced 101-Key Keyboard
- Customized configuration on request
- One Year Parts & Labor Warranty

## UPGRADE OPTIONS

- |  |          |
|--|----------|
| RAM (Per MegaByte)                                   | \$60.00  |
| Add floppy disk drive<br>(1.44M/5.25" or 1.44M/3.5") | \$75.00  |
| 50MB Hard disk                                       | \$210.00 |
| Monitor VGA 12" & Card                               | \$50.00  |
| Color VGA & Card<br>(845x480 16-bit 256K)            | \$240.00 |
| 1024 "True 16-bit 256K Card                          | \$160.00 |
| Setup printer  | \$100.00 |

MS-DOS  
Ver 4.01  
\$65.00

Figure 1 consists of three bar charts labeled (a), (b), and (c), each showing the percentage of respondents for different levels of agreement with the statement 'The government should do more to protect the environment'. The y-axis for all charts is 'Percentage of respondents' ranging from 0 to 100. The x-axis for all charts is 'Level of agreement' with categories: 'Strongly agree', 'Agree', 'Disagree', and 'Strongly disagree'.

- (a) *Control of the environment*: Strongly agree (45%), Agree (35%), Disagree (15%), Strongly disagree (5%).
- (b) *Control of the environment*: Strongly agree (40%), Agree (30%), Disagree (20%), Strongly disagree (10%).
- (c) *Control of the environment*: Strongly agree (35%), Agree (25%), Disagree (25%), Strongly disagree (15%).

## LETTERS

[illegible]

- **1998** **1999** **2000** **2001** **2002** **2003** **2004** **2005** **2006** **2007** **2008** **2009** **2010** **2011** **2012** **2013** **2014** **2015** **2016** **2017** **2018** **2019** **2020** **2021** **2022** **2023** **2024** **2025** **2026** **2027** **2028** **2029** **2030** **2031** **2032** **2033** **2034** **2035** **2036** **2037** **2038** **2039** **2040** **2041** **2042** **2043** **2044** **2045** **2046** **2047** **2048** **2049** **2050** **2051** **2052** **2053** **2054** **2055** **2056** **2057** **2058** **2059** **2060** **2061** **2062** **2063** **2064** **2065** **2066** **2067** **2068** **2069** **2070** **2071** **2072** **2073** **2074** **2075** **2076** **2077** **2078** **2079** **2080** **2081** **2082** **2083** **2084** **2085** **2086** **2087** **2088** **2089** **2090** **2091** **2092** **2093** **2094** **2095** **2096** **2097** **2098** **2099** **2100** **2101** **2102** **2103** **2104** **2105** **2106** **2107** **2108** **2109** **2110** **2111** **2112** **2113** **2114** **2115** **2116** **2117** **2118** **2119** **2120** **2121** **2122** **2123** **2124** **2125** **2126** **2127** **2128** **2129** **2130** **2131** **2132** **2133** **2134** **2135** **2136** **2137** **2138** **2139** **2140** **2141** **2142** **2143** **2144** **2145** **2146** **2147** **2148** **2149** **2150** **2151** **2152** **2153** **2154** **2155** **2156** **2157** **2158** **2159** **2160** **2161** **2162** **2163** **2164** **2165** **2166** **2167** **2168** **2169** **2170** **2171** **2172** **2173** **2174** **2175** **2176** **2177** **2178** **2179** **2180** **2181** **2182** **2183** **2184** **2185** **2186** **2187** **2188** **2189** **2190** **2191** **2192** **2193** **2194** **2195** **2196** **2197** **2198** **2199** **2200** **2201** **2202** **2203** **2204** **2205** **2206** **2207** **2208** **2209** **2210** **2211** **2212** **2213** **2214** **2215** **2216** **2217** **2218** **2219** **2220** **2221** **2222** **2223** **2224** **2225** **2226** **2227** **2228** **2229** **2230** **2231** **2232** **2233** **2234** **2235** **2236** **2237** **2238** **2239** **2240** **2241** **2242** **2243** **2244** **2245** **2246** **2247** **2248** **2249** **2250** **2251** **2252** **2253** **2254** **2255** **2256** **2257** **2258** **2259** **2260** **2261** **2262** **2263** **2264** **2265** **2266** **2267** **2268** **2269** **2270** **2271** **2272** **2273** **2274** **2275** **2276** **2277** **2278** **2279** **2280** **2281** **2282** **2283** **2284** **2285** **2286** **2287** **2288** **2289** **2290** **2291** **2292** **2293** **2294** **2295** **2296** **2297** **2298** **2299** **2300** **2301** **2302** **2303** **2304** **2305** **2306** **2307** **2308** **2309** **2310** **2311** **2312** **2313** **2314** **2315** **2316** **2317** **2318** **2319** **2320** **2321** **2322** **2323** **2324** **2325** **2326** **2327** **2328** **2329** **2330** **2331** **2332** **2333** **2334** **2335** **2336** **2337** **2338** **2339** **2340** **2341** **2342** **2343** **2344** **2345** **2346** **2347** **2348** **2349** **2350** **2351** **2352** **2353** **2354** **2355** **2356** **2357** **2358** **2359** **2360** **2361** **2362** **2363** **2364** **2365** **2366** **2367** **2368** **2369** **2370** **2371** **2372** **2373** **2374** **2375** **2376** **2377** **2378** **2379** **2380** **2381** **2382** **2383** **2384** **2385** **2386** **2387** **2388** **2389** **2390** **2391** **2392** **2393** **2394** **2395** **2396** **2397** **2398** **2399** **2400** **2401** **2402** **2403** **2404** **2405** **2406**

October 4, 2004

1. **NAME** \_\_\_\_\_ **DATE** \_\_\_\_\_

1000000 1000000 1000000 1000000

## Summer Social

**All Books & Magazines  
15% OFF**

**PC Magazine** July 82, p. 95

FIGURE 2. SUBJECT TO CHANGING MORTGAGE MONITOR

[illegible]

**#3, 111 West Broadway,  
Vancouver, B.C. V5Y 1P4**

**TEL. (604) 876-6363 FAX: (604) 876-6361**





## SMARTER BUYERS ALWAYS ASK ABOUT...

- How long have you been in business?
- Floppy Disk Drive - What Brand?
- Hard Disk - What Brand?
- Monitor - OptiPlex?
- Ram Chips - 7n-Second?

**CCS 386DX/486EISA Computers**  
with Canadian Designed

**8-Layer Top-quality Motherboard**

**Will Clear Out All the Headaches from:**

- **SYSTEM HANGUP** due to bad connection with low quality socket/slot, etc.
- **REGISTER LEVEL INCOMPATIBILITY** due to lack of direct tech. support from motherboard manufacturer
- **SYSTEM FREEZE** due to overheating after long running time
- **ELECTROMAGNETIC INTERFERENCE** due to too dense electronic traces on-board surface
- **DIFFICULTIES ON EXECUTING NEW SOFTWARE PROGRAMS** due to no availability of updated technical support from motherboard manufacturer.

**GO FOR  
THE SMARTEST**

**ATTENTION  
Before you just don't  
look at...**



## EISA-i486 Micro System

Licensed Phoenix BIOS, 33MHz 486 Microprocessor with integrated coprocessor and cache controller with 512K internal cache RAM

Optional second-level cache memory with 128KB RAM configurations: 2, 4, 8, 10, 16, 32 or 64MByte. Eight expansion slots. Six full-sized S/18/32-bit ISA Slots Two S-Bus ISA slots  
Coproccessor socket for Wattek 4187



**\$4,999.00** (if 25MHz: \$3,799.00)

### CCS 386/33MHz Cache System

Canadian Designed 8-Layer most reliable motherboard  
Licensed Phoenix BIOS, Intel 80386-33MHz CPU  
Intel 82385 Cache Controller with 32K/64K Caching

**\$1,999.00**

### CCS 386/25MHz System

Canadian Designed 8-Layer most reliable motherboard  
Licensed Phoenix BIOS, Intel 80386-25MHz CPU  
Supporting 80387-25 or 80387 Math Coprocessor

**\$1,549.00**

### CCS 386SX/20MHz System

Intel 80386SX, True 20MHz CPU, Licensed Phoenix BIOS  
Canadian Designed 8-Layer most reliable motherboard  
RAM expandable to 64M on-board

**\$1,349.00**

### CCS 386SX/16MHz System

Intel 80386SX CPU, Licensed Phoenix BIOS

**\$1,249.00**

### CCS 286/12MHz System

80286 CPU, Licensed MAXIM BIOS,  
Up to 4MB RAM On-Board

**\$799.00**

#### All Above Systems include:

- 1MByte RAM installed
- 1 3.5in Floppy Disk Drive
- 40MB/20MB Harddisk
- 100% 1:1 Controller
- VGA Ports
- E-PTL Active Monitor
- Enhanced 10:1 Keyboard
- Small Footprint Case

#### Detailed Technical Spec Brochure

Performance Index Compared to Named Brands  
& End-Users' Reference Available

Prices Subject to Change without Notice

**WHY SHOULD YOU BUY FROM CCS?**

The Best "Price-to-Performance" Ratio and  
Professional After-Sale Technical Service

**Computer and Communication Systems Ltd.**

1235-1237 Nanaimo St. Vancouver V5L 4T5

Ph: 251-3588 FAX: 251-5125



### Alpha MSX

The Alpha MSX is probably the most interesting machine of all featured. Especially, the casing is rounded with a smooth, curved finish. The keyboard resembles one of Tektronix equipment (close to military standard). Very comfortable! The specifications of the 386SX 16MB machine are not unusual, but some features which are optional on other machines not standard on the Alpha. For example, 2MB of RAM instead of 1MB, 3600 baud Modem capable machine, 33 million removable hard battery pack. The Alpha has the option to run on the 500MHz hardware for a 60MHz rate. The screen is very readable, with brightness and contrast adjustment to suit many different lighting conditions. The construction of the machine is of high quality and could withstand the rigors of a hectic environment. In terms of weight and size, it is the smallest form-factor machine at 9.9 lbs and occupies 380 cubic inches. The base price for this unit is \$4799.95. If you want to be distinctive and productive, this machine is designed for both.



### IBM PS/2 Model L40 52X

There's a 384X display on the notebook screen, and an traditional 384X feature, everything about this machine is there well! The first thing that strikes you is that looks terrific like a 10-inch point-to-point. The screen is at the top, thin and two things on either side hang down almost the full height of the machine. There is a camera lens at the top, next the tracking lightens (1/3 lbs) of the unit is suitable to the size (280 cubic inches) is a little disappointing. Once the machine is turned on, though, it's obvious that this is no inferior machine. This particular model has 1MB of RAM (base model has 512K, expandable to 16MB), a 600MB hard drive and runs on a 386SX 16MB is best processor. The L400X has a wonderful layout with 84 full-size standard spaced keys and although the keys are half-height, they have a very pleasant touch. Battery doesn't force you to question your laptop. It also has connectors for both a mouse and camera (though which can be switched directly. One caution: is that the VGA display screen being in contrast, even after tracking the controls. The price is impressive at \$7199.95.

Overall, a serious notebook for the serious user.

### Everex Tempo LX

The Everex product is a flexible. It has sturdy construction with a black casing and a comfortable keyboard. From inside out, not because of the product itself, but because of the quality of all the components and parts—mainly, carrying case, power supply, etc. There is a sense of thoughtfulness to the whole package. The machine has all the features needed for running average applications. Quiet operation, bright screen, and good design are only some of the reasons for looking closely at this notebook. With respect to size and weight, the Tempo LX is exceptionally compact at 9.9 lbs; inches and it weighs 9.9 lbs. At a list of \$1799.00, it may not seem competitive, but we have seen the unit offered for considerably less.



### Q 386 Notebook

The Q notebook is both the lightest and the smallest of all the machines reviewed here. It weighs in at 8.7 lbs and occupies 167 cubic inches. It has all the features of many of the other 386SX 16MB machines. The casing design is black with a distinctive on corners. The display is 640x480 by 480 LxH and like the others with black casing, more bright, with good contrast. This model has 2MB of RAM, expandable to 4MB. Options include a 1600 baud Modem, multi-computers, expansion card, etc. At a list price of \$8,599, this is a machine which could support a wide range of applications and run fast enough to frustrate the keyboarders user.



### Refined Datatrain DPC3816

The DPC3816 is a 386SX 16MB

## 6ppm Laser Printer With Small Footprint Olivetti PG306



**APPLITALK  
NOW  
AVAILABLE**

**FREE POWER  
ETC.**

**2.5MB**

Footprint 18 inches by 18 inches

**\$2184\*\***

(150 sheets)

One paper tray does it all  
Buy a 11.4 x 17 x 11.4 x 11.4  
Prints 15 envelopes at a time

**RENT ME!  
\$85.00/MTH**

**\$1485\*\* PG306 512K**

Expandable to 4 MB  
4 pages per minute  
1.5 inch resolution

**EVEREX**



## BRAMALL BUSINESS SYSTEMS

4880 FRASER STREET  
VANCOUVER, B.C.

**872-0255**

**AMI**

**O.T.W.**



**Prices**

**Outa  
This  
World  
Prices**

If you're concerned about the price of computer equipment, AMI Technology Corp. is the place for you. Our everyday low prices are so low, their down right ridiculous. Sometimes we think The Boss is bowling a few pins short when he comes out with his new pricing every month.

So if you're looking for a new PC, software, printer, or peripheral, give us a call - we'll give you some of the best pricing in B.C.

**AMI Technology Corp.**

4870 Fraser Street  
(Dundas & W. Broadway)

Vancouver, B.C.

970-1040

Tel. (604) 731-1950

Fax (604) 731-7444





# MENTEK

"A commitment to success"



## ATTENTION! DEALERS & VARS

Are you frustrated with cheap components  
and lack of consistency?

**CALL MENTEK**

Are you unhappy with poor support & service?

**CALL MENTEK**

### EXPANDED PRODUCT LINE

Watch for our new **386-40MHz**

Motherboards  
Cases and Power Supplies  
POS Systems and printers

Pocket Modems  
Network Cards  
IDE Adapters

Good quality and true rated components only.  
Tight quality Control with Certificate of Assurance.  
Steady and consistent product supply with fast delivery.  
Friendly and technically experienced  
marketing Representatives.

**THAT'S WHY DEALERS  
THAT KNOW  
CHOOSE MENTEK**



**MENTEK SYSTEMS CORPORATION**

573-13000 Cambie Road, Richmond, B.C. V6V 2K4

Tel: (604) 276-8830 FAX: (604) 276-2992

Albertha: (403) 436-8229

Office Hours: Mon - Fri 9:30 - 5:30, Saturday 9:30 - 12:30 (Est. - Est.)

# The Commodore C286/C386-LT

Commodore Aims High with C286/C386-LT's

by Nancy Lomas



ports and measure approximately 11 by 18 by 2 inches both with an 83-key keyboard with an embedded numeric keypad and 12 function keys, both with a touch-sensitive keypad or a flat screen with a snap display, virtually no stretching or glancing, and VGA, EGA, and HGA modules, both with a VGA connector module which provides 640 by 480 pixel resolution when plugged into an external color monitor. (The display on the C286-LT is slightly more grey and more crisp than that on the C286.)

The C286 and C286-LT are designed to utilize the Comstar 40-megabyte hard drive, in addition to a 5.25-inch 1.44 megabyte disk, but are currently shipping with Comstar's 10-megabyte. The reason for this is that all larger Comstar drives are currently utilized by Compaq (which owns 20 percent of the company).

A Commodore spokesman said they will incorporate the larger drive (at a higher price) when it becomes available and may provide an upgrade path for current owners. MS-DOS 5.1 is included on the basic purchase price, as well as, in Canada, Version 6 of PC Tools Deluxe (from U.S. price buyers get Windows 3.0).

Commodore, better known for the manufacture of the Amiga and C64 computers, has been on the rise in the business of producing PC clones. This may soon change.

With the production of the C286/C386-LT line of notebook computers, Commodore is taking a detour at the top of the line and, for a change, concentrating in the area of performance as well as price.

And cheapness! The street price of the C286-LT is under \$2500; Comstar, and a C286-LT can be had for about \$2500.

Both models weigh in at less than 7

### At a Glance:

#### List Price

Size  
Weight  
CPU/Clock (MHz)  
RAM (Mbytes)  
Display

Battery  
Hard Drive  
Power Ups  
Software  
Internal Modem  
Expansion Slots  
Multi-Configuration  
Coping Case

C286-LT - \$2,499  
C386-LT - \$2,599  
11.1 lbs (incl.)  
2.8 (approx)  
C286 LT - 10.2MHz/12  
C386 LT - 20MHz/24  
1 megabyte sample  
16MB LCD

Comstar 40MB hard drive or internal  
and a 5.25" 1.44MB external  
MS-DOS 5.1 or 6.0  
28 megabyte  
1.44 megabyte  
C286/C386 2.5" 1.44" Turbo/Flash, Ver. 6  
2400 baud (optional)  
1 expansion  
1 optional  
Yes

**BC Cellular**  
The Protected Network



- 386SX Laptop w/80MB Hard Drive
- Motorola 5600M  
Motorola Talkman  
Motorola FT 540  
Motorola FT 840



- Single-Line Fax: Panasonic KX-F50  
Panasonic KX-F50

*Great Prices!  
Excellent Service!*

• Personal Computer (PC), Cellular Phones, Landline Radios  
• IBM, IBM Computer Systems • Palm, Palm Paces • Pacific Talking Dictionary (Hawaii)

**ADVANCED**  
COMMUNICATIONS

1445 West Broadway, Vancouver, B.C. V6R 1E6 736-4488



## NOTEBOOK COMPUTERS

## Available Peripherals

The C256 and C256-LT have two proprietary memory slots. To fill them, Commodore offers memory expansion modules (\$695 for 3 megabytes, and a 76800 loadable random access memory). Also available are spare batteries (\$219) and a spare transformer (\$295).

One of the things I like best about these computers, though, is the fact that they can be utilized with most third party products. One nice derivative of speed modems (just recommended by Commodore) is the WinCom line, distributed in Canada by Telecommunications (300 Wood Road—Unit 20, Markham, ON L3A 5V6, Tel: (905) 460-585-5284).

Kareem offers "ring and play" adapters for Amstrat, Elancom and Telenet local area networks (LA250) which allow laptops to be connected to these networks through the parallel port. The company also offers a parallel port multiplexer in which several other parallel ports can be split into two with no loss of transfer speed.

## GoodMarks Overall

Commodore gets a B+ for dependability. Both models come with a multiplicity of RAM on board and are expandable to 5 meg. Both include a multi-experience monitor.

I liked the feel of the keyboard, the availability of useful function keys, and the fact that the keys do not move or clatter as on some notebook computers.

The multicolored key features are very nice to get used to.

One feature I was especially interested in (just because I'm intrigued as the models I tested) was the ability to automatically store foreign key maps, a particular asset in foreign travel.

The company advertises a two-year life for its rechargeable NiCd battery pack, but by utilizing the computer's memory-saving features, I was able to obtain an average battery life of more than 2.5 hours.

I would recommend these two computers to most laptop and desktop users of students. In spite of the power and many features of the C256 and C256-LT, Commodore offers only a 60-day limited warranty for repair or replacement. If their product is really as good as they say it is, the company should be prepared to stand behind it in a better manner as well.

*Nancy Lawrence is a communications consultant, writer and editor specializing in technical and business publications. She also does on-site, on-line and off-site computer.*

## Notebooks continued from page 35

mounted onto one chip, making the size decrease and the overall speed increase dramatically. These major standards make it for better redefinition in size and weight for notebook use, the fact that the keyboard must fit our fingers, the battery must supply enough power and there must be a standard configuration of some kind. The keyboard will always be a constraint to the width and depth. This battery and to a lesser extent, the floppy drive, will always constrain the weight.

Another aspect to choosing a notebook is its ability to withstand harsh environments and rugged physical shocks. No matter how careful you may think you are, your laptop computer is bound to crash in bumps and jolts. If your intention is to simply replace an office desktop machine with a notebook so you can take your "office" home at night—then any of the above machines will serve the purpose from work to home and back again. On the other hand, if you're out of town on phone sales, client visits, offsite, here, etc., you should choose a system that is put together to endure this type of roughness.

Finally, the bottom line is that the machine must become yours, not your software. Be light enough to carry in a briefcase or even the shoulder; be available under a number of lighting conditions and, be low enough profile to not break the budget. OK, be rugged enough to cause attention (oops!), all of the notebooks reviewed have all two or more of these criteria.

## TwindHead Notebook continued from page 39

and about the CPU speed, setting a great deal of power. (From my laptop, this has been consistently checked. Whether we are working on battery or AC power, we are not over.)

The manual is very good, printed in two colors with numerous illustrations.

Several sections are included that clearly speak to first-time computer users and other laptop computer owners. We found no typographical errors.

The system includes DOS 4.01 and battery watch, disk defragment, password and file transfer utilities.



## MicroGram Systems (Canada) Ltd.

Show Room: #287, 127 St. Fraser St., Van., V6B 1S9

Tel: 604-7916 Fax: 604-7999 Pages: 604-1006

Business Hour: Mon-Fri 10:30am-4:30pm Sat 10:30am-4:00pm

## May is Computer Auto Drive Month!

486-33MHz CAD System \$ 3599

386-33MHz CAD System \$ 2799

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

486-33MHz CAD System \$ 3599

BEST PRICE GUARANTEE

AMI

## Big Deals !!!

All systems come standard with 1 MB RAM  
2 3.5" 5 1/4" Floppy Drive 486-33MHz  
Drive from complete system available. In-  
line Micro Channel, Parallel Port, Serial Port,  
Games Port, CDD Adapter, Power Supply  
and an Enhanced 201-key keyboard.

- 133MHz 386 750
- 16M Hz 386SX 1,079
- 20MHz 386SX 1,179
- 25MHz 386DX 1,395
- 25MHz 386DX w/ Cache 1,490
- 33MHz 386DX w/ Cache 1,675
- 25MHz i486 2,485

## AMI Technology Corp.

1450 W Broadway  
Gastown & W Broadway  
Vancouver, B.C.

V6B 1H6

Tel: (604) 731-7880

Fax: (604) 731-7844



## NOTEBOOK COMPUTERS

network management tools as a computer, it can save package costs as contractors could leave. So, what software is suitable?

## The LPP

My Least Favorite Feature is, surprisingly enough, the touch pad. Although it is a convenient accelerator, I found that any accidental gesture would automatically adjust my focus or line of printing and printing. I suspect it was just a matter of time before someone would find the touch pad even more irritating. I used every bit of my finger, but the pressure sensitivity in "click" a selection caused further discomfort. Pointing with the mouse tip is a popular strategy, mostly to take advantage of the constant dragging and dropping, which adds up to constant rubbing of the touch pad. Anytime you have pointed, I'm usually switching to hand about the touch pad. It's not the most comfortable, so, first, the 3- by 5-inch pad is surprisingly responsive.

## Friendly interface

Usually, the Palm's operating system handles keyboard operations for most functions. Users familiar with Microsoft Windows, GEM/PC or the Macintosh will find little at home here. There's even a Hint option to aid beginners in getting the hang of things. Windows have all the usual pointing and dragging methods, and pressing the Palm key in conjunction with a number key will drop down the corresponding menu. Once dropped down, the cursor key will then key allow repositioning and selection of menu items.

Like Windows, many can be customized areas, and in fact Macintosh tradition, every application has its own set of system files (most a command key up arrow, down arrow, Z, X, C and the Use System Files icon). All applications also have a menu item for opening, saving and printing files. Other common functions are intelligently integrated, such as printing ESC for Canon, Home for OLE, etc.

Files and documents are kept in an MS-DOS compliant format, and all the usual MS-DOS file management features are available.

The Palm's designers obviously borrowed heavily from the design of the Macintosh to make the software as close as possible to the problem of total integration. Any graphical user interface can still feel "new" at least with technology like pressing **SHIFT** to extend a text selection, or **CONTROL-LEFT** to select text backwards.

word, rather than letter-by-letter.

The system is equipped with parallel and serial ports and comes with Epson and Canon 8000 printer configurations. The manual also describes how to configure custom devices or other printers, although this is not a task for the faint-hearted.

I experienced no bugs or software glitches during my time with the hardware. The looks to be durable and well-maintained. The screen is excellent, which may be a problem for some users, but the design considerations greatly to its positive history life.

## Compatibility

The issue of compatibility is relatively straightforward in that the Palm has no trouble in exchanging data with desktop PCs via its built-in serial software and a simple serial port connection (A 500-foot coil of PC Transfer software is included). When equipped with the optional printer, modem or fax modem, the Palm is further blessed. You can even configure the Palm to be connected on via the serial port (usual).

Other unique options are available, too, including one I would have doubt I liked to test, just about the keyboard, a button labeled **Home** is a handy navigation. Apparently, an optional Digital Voice Recorder Expansion Module allows you to attach voice recordings to alerts and diary items, to be played back through the system's 8MHz micro chip. The module allows real-time compression and decompression of voice and the speech can be edited, making it more useful than commercial dictation machines. The company says that 6 minutes of speech may be stored in just 64K bytes.

## OPL

Simple, but I couldn't bring myself to make OPL for the purpose of this review. My first thought was "why have they chosen to include a programming language that few people have ever heard of? However, as these communications, OPL would appear to be a way for anyone with a little programming experience to pick up.

From the manual (a separate 154-page volume), it looks to be a compiled BASIC-like language that supports procedures, modular code and online 8086 assembly code. Programs you write can be executed—compiled into a standard executable. Several in-text examples clearly are given in the manual.

According to the distributor, the Palm website on page 44.

## TOSHIBA

IBM COMPATIBLE



## The Incredible LapTop Sale!

COMPAQ SLT/286



- 80286 15MHz
- 640K RAM (8MB)
- 1.44MB Floppy
- VGA • 1486
- Detachable Keyboard

\$3600!

See Internal Bulletin For Price Per Customer

TOSHIBA T3200SX

- 80286 15MHz
- 256K RAM (20MB)
- 1.44MB Floppy
- VGA • 1486

\$5800!

All products one year Canadian Warranty! One year free on-site service available.

## NOTEBOOKS

COMPAQ LTE386  
• 80386 33MHz  
• 256K RAM • 20MB  
• 1.44MB Floppy • VGA  
\$5100!

COMPAQ LTE286  
• 80286 15MHz  
• 640K • 40MB  
• 1.44MB Floppy • VGA  
\$2400!

TOSHIBA 12000X  
• 80286 15MHz  
• 256K • 20MB  
• 1.44MB Floppy • VGA  
\$3000!

IBM 405X



- 80386 33MHz
- 256K • 60MB
- 1.44MB Floppy
- VGA • 3 in Battery • 7.7lbs

\$5900!

Call for your appointment! 328-2705

Prices in select while quantities last

Technology & Innovation

# AMI



## Grand Opening Blow Out Special !

- 12MHz 286 Personal Computer
- 1MB RAM
- 1.2MB 5.25" Floppy Drive
- 40MB Fast Access Hard Drive
- Parallel / Serial / Game Ports
- VGA Colour Monitor
- Epson T-1000 Printer

\$ 1195 00

AMI Technology Corp.

1428 W. Broadway  
Edmonton, S.W. Bridgeview  
Vancouver, B.C.

YTM: 1985  
Tel: (604) 721-7800  
Fax: (604) 721-7844

# INTRODUCING ALL THE WRITE STUFF FOR HOME OFFICE TYPES


NR-2410  
RAINBOW

NR-1000  
RAINBOW

NR-1001  
MULTI-POINT

NR-2420  
MULTI-POINT

Star Has All The Right Stuff You Need To Get The Job Done.  
For The First Time Ever There's A New Series Of Printers Designed To Bring You  
Big-Business Performance At A Home Office Price. Features Include:


16 Colors Printing  
With 480x480 Resolution


Quiet Zone™



Desktop Icons



Paper Tray



Competition



Low standby mode power



3 YEAR LIMITED WARRANTY

Star Printers - Engineered To Give You The Price-Performance Of A Lifetime.  
For The Complete Line Of Star Printers And Accessories  
Visit Your Nearest Authorized Star Dealer.

## AMHERSTFORD

Taylor Office Products

855-1188

## BURNABY

Future Shop

425-2214

Future Shop

425-5171

## CLEARBROOK

Future Shop

524-1132

## COQUITLAM

Future Shop

464-8326

## COURTENAY

Valley Computers

526-6727

## FERME

Parris Sound Centre Ltd.

425-2111

## PORT ST. JAMES

Data Speed

526-7441

## PORT ST. JOHN

Video World

757-6775

## SAWYERS

Computers

825-6182

## WAGDOE

New Video

824-2257

## WARRIMU

Micro-Video Computers

756-1833

Macintosh Business Machines

752-6985

System City

756-5549

## PERKINER

Astoria Computer Service

432-7675

## PRINCE GEORGE

Computers Computers &amp; Software

964-2775

## NORMAN

Future Shop

874-9445

## SALMON ARM

Computer Professionals

432-4266

## SURREY

Future Shop

588-4191

## WAGDOE

Future Shop

756-6585

## WAGDOE

New-Tek Computers

432-6713

## WAGDOE

Westcoast Computers

286-1980

## WAGDOE

Westcoast Computer Systems

321-7144

## EAST WAGDOE

Future Shop

251-4775

## WEST WAGDOE

Future Shop

960-6285

## Victoria

Columbia Typewriter Centre Ltd.

383-6751

## Future Shop

388-5661

## Future Office Equipment

384-7148



# Super Charged Mini Tower

## IPC Introduces Affordable 33 MHz 486 Power in a Compact Package

It's here! Intel's screaming 486 33MHz processor in a space saving, sturdy mini power case. At over twice the speed of similarly priced 386-33 machines, IPC's entry series 486/ES-33 redefines affordable power.

The 486/ES-33 combines a 64K SRAM Cache (expandable to 256K) and 4MB of RAM (expandable to 16MB on board) with the 486's integrated math co. and 8K internal cache. An ideal fileserver, it is test compatible with Novell, Unix, Xenix, OS/2, Windows 3.0, and all current ISA based applications.

Reliability is the key to the comprehensive IPC 36.1 Warranty. Our U.S. built mainboards use only the finest components and, before they leave the factory, every power packed IPC 486 computer is subjected to a rigorous 4 hour application testing and a full 48 hour burn-in.

For the name of your closest IPC dealer call our national distributor, 3D Micro at the nearest location and find out more about the nationwide onsite service on the Super-Charged IPC-486/ES-33 Mini Tower.

The power hungry need never go hungry again!

### 3D MICRO COMPUTERS

#### Vancouver

(604) 273-8385  
Fax: 673-4552

#### Edmonton

(403) 444-9355  
Fax: 484-0430

#### Calgary

(403) 256-2696  
Fax: 256-3099

#### Winnipeg

(204) 773-9528  
Fax: 773-9034

#### Toronto

(416) 494-0200  
Fax: 494-3204

## IPC-486/33 Entry Series

Microprocessor	i486
Operating Speed	33 MHz
SCSI Hard Drive	105 MB
Floppy Drive	5.2 MB
RAM	4 MB
Video Card	1024 x 768 VGA
Monitor	14" Colour VGA
Expansion Slots	six 16 bit, one 8 bit
Drive Bays	3 half height, two 3.5 inch

**\$3999.00**

Suggested Retail Price

## Pain Computer

continued from page 43



computers are very popular in mobile data collection tasks and a wide variety of data collection programs have been written. These programs, and supporting hardware like barcode readers, are available from the company. From this site a 12000 spreadsheet application.

### Conclusion

Machines like the Pain, Anal Fore-Info or the Strong IQ units are best used for the applications built into them. Users with clearly-defined needs may find that the built-in software tools are enough, but users with more general needs may find that, despite the riches of MS-DOS, the vast array of PC software available needs an understandable alternative to DOS laptops.

All in all, the Pain is an impressive unit that is easy to use and flexible enough to find its way into a variety of various market niches. However, in Pain, it is important to keep in mind that it is not a general purpose machine and not a laptop. Although its proprietary operating system certainly makes it the line of choice in today's DOS-based market, a decrease in look at a solid and innovative alternative to MS-DOS-based portable machines.

# PERSONAL INFORMATION MANAGERS

by George Shale  
and Steve McKinnis

The term "personal information manager" suggests a computer program that helps to manage your personal information—a database of addresses, in-debts, day time functions, etc. The key word here is personal. There are so many different bits of information that need to be managed so there are people, just as each personal computer is not very different, each person will have different information management needs. It would seem then, incorrect to attempt to compare general information managers on a best-worst scale. I may have certain needs which one program addresses and you may have different needs which another program addresses. Direct comparisons of PIMs are unfair at best and deluged at worst. Each PIM is

as different and addresses different functions. In a reviewer's opinion, value to one function does it do as well as someone else. And, keep in mind as a function that to another person there is great value. So you should look very carefully at your own requirements for a PIM, and then select the programs that have the functions that meet your needs. At last, here is a category of software where it is best to suit them to your needs or constraints. Make your choice based on your needs and the program's functions.

Here we look at four PIMs, each with a different approach to managing information and each worth considering.

**Product:** The Manager ver. 2.1  
**Contact:** and sales management software.

**Publisher:** Richmond Software Inc., 428 E. 64th Street, Richmond, B.C. V6V 4C8 Phone: (604) 278-3171 Fax: (604) 278-4148

**System Requirements:** PC, DOS, or compatible, 1 MB free disk space required, DOS 2.1 or higher, 512K bytes available RAM, 80 columns dot matrix printer.  
**Price:** \$249.95, LAN version \$495.

**Key Features:** Address, date, letter writing, Reminders, Contact tracking, Personal address management, Diary, Spell Checker, Calendar, MailMerge (database merge utility), Personal record keeping, Calculator, **Comments:** The Manager, although not as direct sales, or any professional with clients or contacts to track.



## COMPU AGE®

□ BURNABY BRANCH  
1987 Burnaby Street, Vancouver, B.C. V6N 1H3  
Tel: (604) 294-4888

□ KINGSWAY BRANCH  
2212A Kingsway, Vancouver, B.C. V6N 1W1  
Tel: (604) 431-7887

□ LONGBAY BRANCH  
1987 Longbay Ave., North Van., B.C. V7N 1Z8  
Tel: (604) 298-8222

FREE

## YOUR COMPUTER CONSULTANT

LET US ASSIST YOU  
IN YOUR COMPUTER  
PURCHASE DECISION  
WITH OUR 8 YEARS  
OF EXPERIENCE !!

**JUST A REMINDER:  
WE DO PROVIDE CELLULAR  
CONSULTING SERVICES**



WE ALSO PROVIDE  
NETWORKING CONSULTING  
SERVICES. AUTHORIZED NOVELL DEALER

• NOVELL **Novell** • CITIZEN Abaton

• MICROTEK • AMIBOND • NEC • OKI



### Overview

Maximizer is a customized database application program for sales, marketing and follow-up purposes. It can store sales persons in as follows through on the many different requests for information and will take data from an as sales cycle. Customer information is attached to notes, dates, descriptions and contacts. The user can track what happened as the past with a particular customer and what is to happen in the future.

### Operation

Maximizer is a simple, menu-driven, multi-screen database application. The user enters names, addresses and other information to the database. Each time a contact is made with a person, their records are updated with new information from the new contact. Each phone call or letter is tracked with notes to show what happened.

If you spend most of your computer time designing contacts, you can get full benefit from Maximizer. If you spend most of your time in other applications and use in need of a program that will quickly schedule time, there are other PIMS available that can store memory resident and are easier to learn.

### Conclusion

I can readily spot a person who uses Maximizer. If they say they will call me on a particular day, they do and will work on that day. They also have all the information about our last contact at their finger tips.

Maximizer is an excellent marketing and sales management package. Maximizer will keep sales persons on top of more customer requests than competitors by handling manually. This software will secure a more organized and business approach rather than a more market, less patient, rushed approach. Maximizer excels in the area of information management for a sales person.

time, but this does not limit the program to sales people only. If your business brings you in contact with many people on many different issues, Maximizer will help you organize. There is no doubt that the investment for this product will pay off in very direct sales or marketing environments. If you need to increase productivity and professionalize in their sales force, or any professional relationships, Maximizer will go a long way in obtaining these goals.

(At press time, a release from Benchmark Software advised stating that a new research study by Market Intelligence/Research Corp. (402-861-0800) has the Maximizer leading PC-based individual sales lead tracking programs as well as the LAN-based ones. They have 44% of the market for individual users, and 25% of the LAN market. The study also notes that it is the youngest of the salesmanagement/leadtracking programs in its only non-U.S. firm to hold a strong market position.—ED)



**Product:** **Maximizer** **Model:** Ver. 1.2, Personal Information Manager  
**Publisher:** Chronologic Corporation  
 21011191 North Central, Los Angeles, CA 90024  
 Phone: (800) 283-3166 Fax: (800) 283-0700  
**System Requirements:** IBM PC, XT, AT, PS/2 or compatible, 1MB RAM, VGA or higher, hard disk or 350K floppy  
**Price:** \$199.95  
**Key Features:** Auto dialer, Clipboard to Word text to other programs, Reminders, Alarm message pops over other programs, Calendar, Calculator, Diskless entry notification, Automatic contact checking, Quick time to follow, On-line context sensitive help, Validating, Password protection, File capability  
**Of Interest To:** Those in need of a time management program that can schedule time easily.

## Newsbytes News Network

**"If you're interested in any aspect of the computer industry, you can't afford to be without Newsbytes."**

*—Editor, Computerworld, the "Year Ahead" of personal computing*

**Newsbytes News Network reports are now delivered!**

Electronic real systems served include

• **APC** • **Internet** • **Novell** • **CompuServe** • **Slalom** and others

Faster than the weekly trade magazines, essential to your planning. Newsbytes has 2 columns each week, packed with reports on software, hardware, multimedia and trends, federal contracts, business mergers, financial impacts, and legal news affecting the computer and telecom industries.

Rely on the timely, trusted resources of Newsbytes' 19 reporters from the world's largest daily computer industry news services, the award-winning Newsbytes News Network.

Mail this form with a check for the first month's issue to: **Newsbytes News Network**, Subscription, 120 Atlantic Street, San Francisco, CA 94111. Send any time for actual value of the unused portion of your subscription. Call for more information: 415-386-7504

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_ Zip/Country Code \_\_\_\_\_

Check one: ☐ Option 1: 120 months electronic mail delivery

\_\_\_\_\_ Computer Mail System and Address \_\_\_\_\_

☐ Option 2: 120 months with delivery: 11 base rate 11.32 PC rate



# AMI



**Its not a deal,  
its a  
Steal.**

- 16MHz 386sx Personal Computer
- 1MB RAM
- 1.2MB 5.25" Floppy Drive
- 40MB Fast Access Hard Drive
- Parallel / Serial / Game Ports
- VGA Colour Monitor

**\$ 1325<sup>00</sup>**



**AMI Technology Corp.**

1400 W Broadway  
 (Oxnard & W Broadway)  
 Vancouver, B.C.  
 V1H 5H6  
 Tel: (604) 731-7886  
 Fax: (604) 731-7844



## BIG MOUTH

**VOICE MAIL  
TELEMARKETING  
CALL PROCESSING  
ALARM NOTIFICATION**



Canadian Exclusive Distributor

**PC Voice Technology Inc.**

Phone: (416) 548-3017 Fax: (416) 238-5471

DEALER INQUIRIES WELCOME





more places of information. For example, a telephone might include a "product code" field in their system category. The telephone could then look under a specific product and find each person who bought the product.

Current might be your choice if you want more than your reports. Current allows you to cross-inquire for better worksheet information to the magazine. By selecting a template you enter a complete record you view it. Current's multi-field capabilities provide report-by-power.

### Conclusion

If you use Windows a lot, this package is useful. With adequate memory, you can quickly access Current while in other applications.

If you are only a periodic Windows user, you may not get full benefits from this package. Your personal information manager should be in the environment that you are in the most. When not running Windows, you do not have quick access as you would with a DOS-based memory-resident PIM such as Instant Recall. Unless you are in a situation where you would be in the program most of the time, such as a telephone, Current may not be as useful to you. If you are in other non-Windows applications at the time, a memory-resident PIM that can be accessed anywhere may be more effective.

Current is a full featured PIM that can help you in the busy person's quest. With Current's outstanding capabilities, no task are limited only to your imagination.



**Product:** Facilitator ver 3. Personal Information Manager for Windows  
**Publisher:** Polaris Software, 1820 E. Escondido Blvd., Suite 100, Escondido, California 92026 Phone (619) 435-1800 Fax (619) 435-1801  
**System Requirements:** Microsoft Windows 3.0, IBM PC AT, 286 and above compatibles, VGA, VGA or better graphics adapter, 640K RAM, 100K+ disk for Facilitator  
**Price:** MSRP \$549 CAN  
**Features:** Password protection, Quick dialer, Gantt charts, Alert reminders, Windows Dynamic data exchange, time management facilities, French Canadian translations, French log, Expenses, Automatically compute cost of time-related items, Print labels and addresses, Internal custom reports  
**Get instant 20 minutes** entry that are in need of a full-featured personal information manager.

### Overview

Facilitator stores your information in data files that you open. You can have one or more data files open at a time. Information stores (Suppliers, Clients, Contacts, etc.) are stored in "Facilities." Information can be related within one facility or between different facilities by using "Keywords" or you can manually

attach any item to another item. An extensive search feature allows you to search for information within and across facilities.

### Operation

Facilitator operated flexibly in all test situations. It is easy to enter appointments and the default calendar view makes it easy to see your day, week or month. An excellent Alert feature can be set to warn you of important tasks even if you are in another Windows application. The screen can be customized so that you have easy access to frequently needed information.

One feature that some might find useful is the ability to use information in separate data files, yet, still be able to open more than one file at once. For example, you can put all the information for your company's gift transactions in a separate file so that you don't have to search through everything to find information.

Facilitator also can transfer information with Gantt Bars or Sharp Wizard so you have access to information when your computer is not handy.

Facilitator also possesses other Windows applications for word processing and spreadsheet work. Tasks such as mail are you have to be doing using Word, Facilitator with Facilitator are easier for Instant Recall and Word for Windows that allow you to track activity of Word and Facilitator in Facilitator.

### Conclusion

You can't find a better free management program for Windows than Facilitator. The features it lacks are made up for with integration with Microsoft Word for Windows and Excel. But, the addition of a good word processor to write sample letters to contacts and the mail merge would make this package more complete for those who don't have Word for Windows or Excel. Other than this, Facilitator has very few limitations.

George Stale and Steve McKeown are senior partners in DR Software Review Corporation, a company specializing in independent testing, evaluation and review of MS-DOS-based products for further information, phone (604) 754-0517.



### PIM for Real Estate

Real estate agents looking for the ideal personal information manager might consider one of Top Producer Contact Manager by Top Producer Systems, (800) 274-5127. It has links to the Vancouver Real Estate Board's online system, as well as appointment and task scheduling, and automatic reader and journal printing/del

## PowerPay®

### The Ultimate Payroll Program

**BUSINESS OWNERS!** Take advantage of this powerful Canadian payroll program to handle your payroll.

**\$89**

**Learn to Operate in 20 minutes or less!**

- Simple Pay Entries
- Gross & Net Deductions
- Form Data Tables
- Easy to Just One Key Shows Year

### Flexible

- Choose pay period and pay method individually for each employee

### Powerful

- Captures pertinent information for necessary reports

### KEY FEATURES:

- Pay Periods**
  - Weekly Monthly or Pay Methods
- Monthly Salary Monthly Pay Deductions Reports**
  - Reverse Canada Remittance
  - Monthly Improves Accuracy etc.
- Benefits and Deductions**
  - Six Benefits (Free Customized)
  - Nine Deductions (Free Customized)
  - 100% Support etc.
- Other**
  - Address Change Handling
  - Print Data On-line
  - 74 Features

**System Requirements:**  
16 MB memory, DOS 3.0 or higher, hard disk, 1.2MB or 1.44 floppy disk drive or equivalent media. Runs on IBM and 100% compatible. Supports all popular printers.

\* Free customer telephone support

**Print! Fully Working Copy of PowerPay! Limited Employment**  
Send \$9.95 for postage and handling. While Quantities Last!

### PowerSoft Systems

2871 Ringway, Vancouver, B.C. V6R 6L9

Tel: (604) 432-7077 Fax: (604) 432-1855

WE'VE GOT THE ANSWERS  
**AMI**

**The Boss Must Be Nuts!**



- ★ 20MHz 386sx Personal Computer
- ★ 1MB RAM
- ★ 1.2MB 5.25" Floppy Drive
- ★ 40MB Fast Access Hard Drive
- ★ Parallel / Serial / Games Ports
- ★ VGA Colour Monitor

**\$ 1425<sup>00</sup>**



**AMI Technology Corp.**

1410 W Broadway  
(Ginnery & W Ginnery)  
Vancouver, B.C.

VIN 1165

Tel: (604) 731-7880  
Fax: (604) 731-7884

# The Sharp IQ-8300M Electronic Organizer

By Gwynn Bennett

Product IQ-8300M Electronic Organizer (also known as the Wizard in the Hat)  
Manufacturer: Sharp Electronics, 235  
Brimley Road East, Mississauga, Ontario L4T  
1G5  
Configuration tested: 128KB (User view)

approx. 1100KB, IQ-7600 Mac interface software  
Weight: 2.5kg (5.5lb) Dimensions:  
Height: 21.5cm (8.5in) Width: 19.5cm (7.7in)  
Battery life: approx. 90 hours, average use  
Price: \$249.95, Mac interface & software:  
\$149.95, PC interface & software: \$189.95

If just of your everyday business activities involves meeting people, you have probably had too many business cards ground into your palm to keep track of. Today a business people often rely heavily on "day timer" type organizers (this function and various other neat pocket organizers to keep track of their schedules and take notes with. Further, who doesn't need to do numerical calculations once in a while?

So, as the very statement, people who single-handedly businesses a professional business really need to carry around a



calculator (which is even for study and weekly notes), a telephone book, a notepad, a stack of business cards and if they still have any room left in their pockets, a pocket calculator.

To really have things for everything though, a person should also have a device that can calculate transactions around the world, be able to setup telephone online transactions of complex orders or make maybe even account with the office from remote locations. And of course, they'd want some a little day to day necessary.

Well, having all these abilities would make a person a veritable juggernaut on the business world. (Can you still what that is and looking up to?)

Of course, any portable computer could perform all those tasks. But they are too big, too intricate to easily go anywhere. In people who take calculations can tell you, the likelihood of having your career with you in the company is pretty opportunity seems to be extremely proportional to the size and weight of the camera. So it's with bulky laptop or notebook computers, with their clunky tape and interface systems. No, the perfect business companion would fit easily in a briefcase and look like a calculator.

The pretty much complete the design concept of the Sharp Electronic Organizer. It performs all the above-mentioned functions (requiring an optional RS-232C connector and module in telecommunication), easily interfacing to a desktop PC or Macintosh to transfer its data as desired.

Remember as every own calculator with its display screen, keypad, the clock, calendar & calculator. It's more generally feature like a computer. Sure it's not as much as a personal computer, but it's more like the different organizers from: Calculator, Weekly, Daily, Schedule, Tel. Directory, Memo, World, Home, Business Card, Call and Card.

What about business from some major in desktop Card is a demonstration of the main. Help facility for the other functions, however, it is the others you would plug in and make them as important as a calculator. In other words, including Time Expense Manager, Telephone Directory, Language Translator, Money Printer, 3-D Architecture, BASIC Assembly Compiler Card, and English-French and English-German Bilingual Dictionary. You'll be so overwhelmed you'll know where you're going to go to find that and enjoy the look on their face.

In a brief example of technological possibility the IQ-8300M's Help function allows you to discover business of the

**Fantastic Price**  
The incredibly easy way to do more with ANY PC in the office or home

**ONLY \$99**

limited quantities

**ENSEMBLE**  
Windows is there even without a word from you.



The integrated writing/desktop packages:

#### • **DocWrite**

Combines a robust WYSIWYG word processor that delivers enhanced writing and technology capabilities (formatting and layout options, automated editing and proof, and export save of doc.

#### • **DocDraw**

DocDraw is a easy-to-use powerful drawing program.

#### • **DocManager**

DocManager is a handy, comprehensive DBL solution for managing files and folders.

#### • **DocEdit**

DocEdit can read and edit text, both on and off-line, using a built-in editor.

#### • **DocPrinter**

DocPrinter is a flexible editor and spreadsheet tool. Combined with DocEdit, it offers the personal information needs of the professional.

#### • **DocConnect**

DocConnect is a flexible interface program that lets you explore the world of the personal.

#### • **PC/GEOS**

PC/GEOS is a way to see the world of the personal in a new way.

#### • **Software applications**

## Rave reviews:

PC World (Nov. '88): "GEOS could be the biggest thing since Windows."

PC Magazine (Nov. '88): "You owe it to yourself to understand GEOS and the choices it offers."

InfoWorld (Nov. '88): "GEOS appears to be superior to Windows in everything but size, usability, and the number of available applications."

Computer Power (Jan '90): "I could not find a single bug in PC/GEOS."

■ LEASING ■ PERSONAL FINANCING ■ CUSTOMER SUPPORT

**STRACHAN**  
COMPUTERS LIMITED



#### **NORTH HAMBOROUGH**

4000 HWY 7  
Unit 100, Markham, Ont. L3R 9V1  
Tel: (416) 470-1111  
Fax: (416) 470-1112

#### **WEST HAMBOROUGH**

1000 HWY 7  
Unit 100, Markham, Ont. L3R 9V1  
Tel: (416) 470-1111  
Fax: (416) 470-1112

#### **GOVERNMENT**

1000 HWY 7  
Unit 100, Markham, Ont. L3R 9V1  
Tel: (416) 470-1111  
Fax: (416) 470-1112





### Data Transfers to Computer

With the optional IQ4000A interface and software package, Macintosh computer users can enter Schedule/Tel/Memo data on their Macs and download it to the IQ4000M Electronic Organism (A PC version is also available).

Data entered on the Electronic Organism can also be uploaded to the Mac and converted into formats readable by virtually any spreadsheet or database product, including Works, Excel, Full Impact and Wing.

Written by HyperCard guru Donny

Goodman, the software is in the form of a HyperCard stack. It comes ready to run with a copy of HyperCard 1.2.1 and the previously mentioned cable that performs the necessary level conversions between the Mac's IQ4000 and the IQ4000M's RS-485 serial ports.

Considering that Donny Goodman is reportedly such a HyperCard expert (he wrote "The HyperCard Programmer's Handbook"), it's strange that the product suffers from such oversights as screen (or don't) before the way they should (i.e., you can't select a menu item in the one you're looking at by holding the mouse button down and pointing at it, as you can in every other Mac program), and programs drive like the car that causes the whole computer to lock up if the program goes looking for an Organism that can't be found. Luckily, Bob Gurner of Advantage Computers reports that he had to pay \$100 to upgrade system so he could use the supplied software, which, by the way, was in line with everything he looked for anyway.

Also, considering that Goodman writes for a living, it is odd that the product's manual makes absolutely no mention of whether the Electronic Organism and Mac should be on or off when connecting the two units to the interface.

Gurner, who found on a visit for evaluation, concern in the IQ4000M with the Mac's power on, and reported the busmaster/priority problems. He notes the interface could connect to Mac even when the IQ4000M isn't switched, and simply turn off the Electronic Organism when connecting the two. However, Goodman never describes turning off any electrical devices before connecting or disconnecting cables of any kind to be completely safe.

In Computer's Macintosh Systems Reference Guide (G0-MACR50), there is a free available program called HIGWELBIM that takes HyperCard's address stack and routes it to the Sharp (called the Wizard in the U.S.) via its computer link software. Another program found there enables the transfer of data from the HyperCard program Food Processor Wizard. Comparisons elsewhere (including Donny Goodman's) regularly discuss Sharp Wizard-related topics in the strange but true, too.

### Conclusion

The IQ4000M is fairly easy to use once you get the hang of typing on its somewhat lumpy, and the sometimes-confusing labels on the keys, but like the average individual (a reminder, you'll need to consult the manual to help explain its many features). With its only storage not external of approximately 2.5MB of non-volatile memory, L292 Schedule needs an 8128 memory module. In this new line from up to its billing as an Electronic Organism. The rest, as they say, is up to you.

Q:

**Why are Computer Resellers and VARs across Canada switching to STD for systems & peripherals?**

EPSON  
CYRIX  
EVERDATA  
CARDINAL  
HYUNDAI  
NANAO

A:

VANCOUVER  
EDMONTON  
WINNIPEG  
TORONTO  
OTTAWA  
MONTREAL  
HALIFAX

**Because the best only deal with the best.**



**STD**

Unit 140 • 5001 Jervis Rd.  
Richmond Hill, Ont. L4B 1Y1  
Tel: (905) 879-3200  
Fax: (905) 879-3300

## COMMENTARY

# Retro Computing: A Cure for Creeping Elegance?

Editorial by Steven Bassett

You've probably heard the joke that a camel is a horse designed by a committee. Well, software designed that way often becomes even more ungainly.

Driven by a well-known aversion to have their most features, highlights and add-ons may become so literally, complex and/or confusing that most people's desire of simple elegance. Another phenomenon allowed that to become the dominant technological innovation method, while Intel is clearly more efficient.

It has been postulated that the reason that OS/2 never really caught on was its poor performance, indicated by a huge loss of features. In a classic case of "creeping elegance," Microsoft's OS/2 designers kept adding features upon features until the basic bulk of the program became unwieldy for all but the most power-hungry—and patient—users.

Other, more cynical observers speculate that Microsoft continued the other big software houses to write for OS/2, then deliberately failed to, giving themselves a huge headstart on capturing the major share of the market they really cared about: all along Windows 3.0. Now, imagine the complete version of OS/2. It is called OS/211! (Not Windows 3.0, of course, a perfect example of creeping elegance.)

## Out the Bells and Whistles

There is an interesting parallel here to the automotive industry. Automobiles show a considerable backlash against excessive bells and whistles that confuse or intimidate the operator. Chrysler, for one, has experimented with new, simpler-looking dashboard controls that have at least the look of utter simplicity. It is hoped that consumers will choose a product that makes them feel stupid and inadequate (although the combination of excessive bells and whistles and continued technological operating systems seems to refute that theory).

That may in part explain the extraordinary success of retrocomputers like the Macintosh, whose manufacturers of late call "home" computers simple and elegant (and rightly) claim that their systems are comparatively simple and offer greater ergonomics and flexibility.

## Less Is More

Less is more—proposed that increase in size and complexity become faster. One can only hope that the new features, gizmos, more than offset the performance losses. Frequently, software upgrades that add features have features in the cost of system performance rather than to eventually return to older, simpler versions. Especially, the most elegant graphical interface on version 5 of Norton Utilities for the PC has caused many users to return to the safe haven of good old character-based version 4.

Good Times is another example of a PC program that traded speed for ei-

gance. Version 5.0's speed and user ergonomics about 20% worse than those of version 4.21.

Similarly, the new EditMaker Pro for the Macintosh overtook the size of the word-processing software that it replaced it. The sluggishness and memory requirements—longer for RAM and disk space—made these upgrades of questionable value.

Despite the touted benefits of a graphical user interface, I know many PC veterans who are simply not willing to take the performance loss that comes as part of it. Their choices-based applications are displaying perhaps 60 columns by 45 lines, at 200 characters per screen. When they switch to a GUI, they suddenly have 300,000 pixels to push around on a screen now expressed in 800x600.

## Why Fix It If It Ain't Broke

It is conceivable that Apple's much-debated System 5.0 may deliver a similar fate to that of OS/2. Long perceived as having the best graphical user interface on the market, Apple has been under fire recently from those who claim that Windows exceeds the last reason that anyone would have for choosing a Mac over a PC: its elegant throughput who has tried both systems would probably disagree with).

Now Apple is placed in the rather awkward position of having to prove that better (speed), and retain the Macintosh advantage. The dilemma of trying to provide a superior operating system without inducing unacceptable levels of complexity, incomprehension and bugs has proven challenging, to say the least. But Apple, being that for the users, or the analysts?

Macintosh provides Mac users claim they are not going to upgrade at all. These users claim that they got the job done and they can't afford more downtime while they test down bugs and software conflicts caused by the upgrade. If it ain't broke, don't fix it.

One expects that Apple's manufacturers are as much interested to continue Word Series of its continued stability, as they are to serve its current users.

## Revolutionary Trends

In what about this time? Look at the most successful Apple's Mini Classic, a smaller more like their original 1984-model model than any of their recent models. Apple has proven that the mini market doesn't want features, expandability or power to match its reliability, comfort and a low, low price. Even the Classic's name marks of conservatism.

The only reason to be borne out by the similar popularity of 80486 notebooks and PV1 offering more popular than the PV2 that provided it, might be that the mini computer for an even bigger reason if they continue the retro trend and make it the PV3?

# SECTOR TECHNOLOGIES LTD.

Computer Hardware Specialist

Competitive Pricing on a Selection of Laptops & Notebooks

Tel: 876-9943

Fax: 876-0000

386SX-16MHz \$1159 286-12MHz \$779

386SX-20MHz \$1269

386-25MHz \$1479

386-33MHz \$1749

640 Cache



All systems include:

- IBM or VGA
- 20, 25, 33 Floppy
- Mouse, Keyboard, Cables
- Expansion
- 1 1/2" Amiga Monitor
- Microsoft MS-DOS
- 1, 1.44MB Floppy Disk
- 48MB 386 SX HD

More  
Options  
to  
Choose

## SUPPORT SERVICES:

In-house staff or on-site service technicians at reasonable rates are available on variety of systems.

Extended warranty available - Call for details

QUALITY SERVICE IS OUR GOAL

System testing, microcomputer repairs, upgrades and other services are available

TWO YEARS LABOUR AND PARTS WARRANTY

3COM, Novel, Unisys

621 Kingsway Vancouver

PC'S, NETWORKS AND UNIX SYSTEMS




## Lip smacking performance.

- 20MHz 386DX Personal Computer
- 64K Static RAM Cache
- 1MB RAM
- 1 3MB 5.25" Floppy Drive
- 40MB Fast Access Hard Drive
- Parallel / Serial / Games Ports
- VGA Colour Monitor

**Special Price**  
A complete system with everything you need to get started.

# \$ 1825<sup>00</sup>

**AMI Technology Corp.**  
1458 W Broadway  
(Greenwich & W Broadway)  
Vancouver, B.C.  
V7H 1H6  
Tel. (604) 731-7880  
Fax. (604) 731-7844




## WINECRAFT REVIEW

## Aldus PageMaker 4.0 for Windows

1000 1000 1000

Manufactured by Alltel Corp. 401 East Avenue South, Suite 100, Memphis, TN 38104-1077

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

**System Requirements:** 1500-2000 MHz with 2GB RAM, 20 GB free hard disk space, Windows 10

**Manufacturing and Distribution:** TMS PC, 12000 Blvd., 70049, Miami, Ohio

100

**Investment:** Includes two special deals from Microsoft for 100,000

As most of us have either discovered for ourselves or read in flimsy public-domain work in *The Computer Paper*, Microsoft's Windows 3.0 has revolutionized the way we use PCs today. And while there are several applications available for Windows 3.0, how can its memory management, graphical and command integration features be full advantage? As many non-configuration applications appear for Windows 3.0, we discuss new features for this amazing graphical user interface.

Office: PageMaker 4.0 for Windows.  
 All files and programs are available on our website.

Payday-lender programs that Wisconsin 2.0. This provision actually takes advantage of Wisconsin's income tax. First, the commission is completely new through Wis. 2.0. Second, collections are made in discreet boxes (like any other physical application) and everyone was clear on this point. That installing Payday-lender is simply another than every has been before. It also takes advantage of Wisconsin's 2.0 necessary consequences. Payday-lender now requires shopping a bill of \$100 to meet a loan. However, all users have the better Payday-lender will perform. In terms of hard cash spent, Payday-lender transactions appear about the same as most. It is not clear how many times, however, and internal fees may change to apply.



**Figural/Allegorical** names: traditional symbols or icons

**References**

The very first thing, as explained in our article on PC PageMaker, had to do with the nature of PageMaker's 8.0 menu: a menu menu and multiple windows structure. This change is required to support many of the features that we will discuss in this article. For example, the old Line and Shaded areas have been integrated into a new Element menu. This makes sense since that's how they behave. Additionally, PageMaker supports multiple instance panes as it does on the Macintosh. The Type menu, for example, has a submenu of options when selected, displays an add-on menu listing all of your fonts. A drawback of these add-on menus is that, unlike the Macintosh, Windows does not support scrollable add-on menus. So, if you have a lot of fonts, you may not be able to see them all. You can be displayed on one screen at a time, you will not be able to see the fonts in other selections. That is only a minor inconvenience since all these can be moved through the Type Specs menu in the Type menu's later submenu.

With PageMaker 5.0, Adobe turns their page-layout program up to a much more professional design tool than ever before. PageMaker is an always been popular, first, because it can mimic the Windows environment and second, because its "pushpin" approach to document design. Most people who have done manual printing find PageMaker easy to use since it provides them with an electronic punchboard. These features alone are enough to bring PageMakers full acceptance within the IBM PC world.

New features such as a **File Editor**, enhanced **File List** and **Typographic controls**, more keyboard shortcuts, **Log Document** management tools, a **Table Editor** and a **fast link to Microsoft Word spreadsheets** make the PageMaker 4.1 a truly powerful page-layout program. It still doesn't have everything you may want in a layout program, but version 4.0 gets a long way towards satisfying your needs.

**IF YOU DO WINDOWS  
YOU NEED DARIUS™**



**W**ith the introduction of sophisticated graphic-oriented software such as Windows 3.11 by Microsoft, you need a high-quality color monitor to get the maximum benefit from the graphics. Daurus Technology Inc., an innovative advanced technology manufacturer, has a full line of monitor solutions for you.

Starting with the Daurus **18" VGA-4448**—an economical upgrade to a color VGA monitor, including the Daurus **750M-4431**—a Triple Sync Monitor which is compatible with VGA all the way up to 800/60, and Macintosh II. Through to the Daurus **18" V-5054**—a 320x200 750 high resolution monitor, Daurus offers you a family of basic, reliable VGA color monitors to meet your requirements.

**ENROLL NOW!** ENROLL now with a **TWO-YEAR WARRANTY**, plus the proven reliability and workmanship you expect from **Genie Industries Inc.**

For more information contact your preferred Barnes dealer

<b>COLONY CORP.</b> Cincinnati, OH 202-512-8822 800-495-4848	<b>CONQUEST COMMUNITIES INC.</b> Fort Myers, FL 888-424-6888	<b>E&amp;L</b> Weymouth, BC 604-272-6242
<b>COMBUSTION</b> Columbus, AB 403-400-0271	<b>CONSIG COMMERCIAL</b> Seattle, WA 206-462-2126	<b>ESSEX/ELITE CONCRETE</b> Trenton, NJ 609-406-4444
<b>COMBUSTION CHARTER</b> St Paul, MN 652-643-6653	<b>CONSIG COMMERCIAL</b> St. Louis, MO 314-291-1822	<b>FIN FINISH FLOOR COMPANY</b> St. Louis, MO 314-682-7467
<b>COMPOSITE PLATE</b> Minneapolis, MN 612-634-7900	<b>CONSIG COMMERCIAL INC.</b> Moline, IL 309-391-2002	<b>VALLEY CONCRETE</b> St. Louis, MO 636-406-8777
<b>COMPOSITE SOURCE</b> Columbus, AB 603-544-5522 603-544-5523	<b>CONSIG COMMERCIAL</b> Baltimore, MD 410-433-5254	<b>MAHONEY CONSULTING</b> Fort St. John, BC 254-787-7018
<b>CONCRETE REPAIR</b> Burlington, VT 802-661-0221	<b>CONSIG COMMERCIAL</b> St. Louis, MO 314-404-0387	<b>NEPHEW CONCRETE</b> St. Louis, MO 636-321-7144
	<b>CONSIG COMMERCIAL</b> St. Louis, MO 314-404-0387	

DANLOS® is Distributed in Canada by TE-EM Technology Inc. 2800 Inglis Avenue  
Burnaby - BC - V5A 4L7 - Tel. (604) 273-8000 - Fax (604) 276-0000

© 2005 Blackwell Publishing Ltd, *Journal of Internal Medicine* 258: 103–110



PageMaker 4.0 now supports multiple windows and includes a story editor.

### Editing Stories

The Story Editor is one of PageMaker's strongest features. It consists of a simple word processor built into the PageMaker framework. The feature that it put second to, you could write, insert and format an entire publication without leaving PageMaker 4.0. While this is possible, it is not necessarily desirable.

PageMaker's Story Editor is simple to use: simply click on the pointer tool on a text block or select it and press Command-B. A new window opens to the story text in word processing format. This window includes a spelling utility with a comprehensive dictionary (through most of the typographic and graphic design items used in this article were not found in this dictionary), it includes a powerful search and replace feature (other apps support searching for text attributes such as bold or italic) and it lets you make major corrections quickly and easily (but it does not include implemented word processing features such as glossaries and thesauri).

I still believe that the best way to start a PageMaker layout into one real word processor to begin with. Once the story is placed into a PageMaker layout, the story editor is good to perform minor changes and find proofs of the documents.

### Style Sheets

Style Sheet controls have improved dramatically in PageMaker 4.0. Paragraphs can now be aligned to baseline grid, making sure that your columns always balance across the page. Headings can be tied to the following text in word having the headline appear on one page and the following text on another. Major headlines can support page breaks before making sure that major stories are always on one page. And column lines can be applied to graphics to create styling effects.

But the most powerful new feature supported by PageMaker Style Sheets is a following style. This feature, like most of PageMaker's word processing features, originated in Microsoft Word. It means that you can create a style and assign another style to follow it. For example, Subhead 1 could be followed by Body Text. The effect of this is that when you assign Subhead 1 as you apply text, the Body Text style will automatically be assigned to the following paragraph as soon as you press Enter. This makes the usage of Style Sheets much more complex elements.

### Typographic Controls

Along with new style controls, PageMaker 4.0 supports new typographic controls such as kerning, foot width changes, tracking and letter spacing. Each of these features is new in PageMaker. Kerning was new to postscript in 1.7 version of the app. This would not mean much in PageMaker 3.0 since we could never really use a typographic properly until it reached a certain size, but in PageMaker 4.0 along with the new Adobe Type Manager (in use the typeface is a superior on paper), proper kerning is easily achieved.

The Type Specifications dialog box from new features. The ability to change the width of a line. For more with limited line reformatting, this adds a control which has a range of design ability. Each line can be stretched or condensed by 0.5% to 100% of its original width. Each typographic can also be used from 4 to 400 points in 1/10th of a point increments. With the ATM, these features now even supported on HP LaserJet.

Even in PageMaker 3.0 will remember that the Type menu contained a feature called Spacing which gave control to word spacing. That only does word and letter spacing work in PageMaker 4.0, but it is not extremely well. Version 4.0 also includes a new leading feature which lets you globally increase or decrease or change increments. Once a word is properly set, it can then be moved in increments of 0.5-points. All in all, these typographic controls give users the change from 3.0 to 4.0.

### New Shortcuts

Version 4.0 also includes several new shortcuts which really speed the operation of PageMaker. That one more from page to page with the F11 (Page) and F12 (Page) keys. F9 will always return the window to the previous page. These are available for each text, paragraph alignment and kerning or tracking feature. The Story Editor uses the same command as Microsoft Word (and PageMaker 3.0). And each new feature includes its own shortcut.

Perhaps the most exciting new feature for old and new is the new page. This feature lets you copy a selected object and paste it to the new page. For example, for example, you need to make a form which has 10 boxes each speed 2 pages up. In PageMaker 3.0, you have to move each of these manually into position. In 4.0, create the first box, select it, copy it and while it is still selected, use Command-B to paste and move it into position. Then paste to all the others automatically into their own position by using the macro-shortcut. This copy and paste procedure is one of the reasons Quark II chose to use a page.

### Long Document Controls

PageMaker 4.0 now supports documents with up to 999 pages. PageMaker 3.0 never will know that this is somewhat of a joke. Even though PageMaker 4.0 supports entire books in a single document, such as text and graphics files just copying them into the PageMaker format is tedious, a 999-page document in PageMaker could easily exceed 30 megabytes in size. Unless you have considerable hard drives, this is a most important way to use PageMaker. We have documents

THE PACIFIC NORTHWEST

# ATARI Festival

JUNE 15-16

10:AM - 6:PM

\$5.00

- GAMES
- BUSINESS
- MIDI / MUSIC
- DESKTOP PUBLISHING

- GAMES
- SEMINARS
- OODR PRIZES
- REFRESHMENTS

Drop in and talk to Atari Corp., all major software and hardware developers and dealers as well as hundreds of other Atari users.

Starvation Center Secondary School, 10444, 12 Road, Richmond, B.C.

## Touchdown !!!

- 33MHz 386DX Personal Computer
- 54K Static RAM Cache
- 1MB RAM
- 1.2MB 5 1/4" Floppy Drive
- 40MB Fast Access Hard Drive
- Parallel / Serial / Games Ports
- VGA Colour Monitor

## \$ 1940<sup>00</sup>

**AMI Technology Corp.**  
 1430 W Broadway  
 (Granville & W Broadway)  
 Vancouver, B.C.  
 V6H 1A6  
 Tel: (604) 731-7880  
 Fax: (604) 731-7844

# LASER PRINTER SUPPLIES

- New and Replaced Toner/Cartridge Cartridges for Laser Printers, Canon/HP/Minolta/DC/Canon
- CPC Stamps, Developers, Roller Kits, Copier Toner
- Full Service by Laser Printers
- Ask about the rebate for Quattron cartridges

**VISTA LASER**

Tel 279-5448 Fax 279-5438  
11-12171 Bridgeport Road, Richmond B.C.  
OUT-OF-TOWN CALL COLLECT

**Coupon Worth \$10.00 Off**

Ask about our complete recycling program.  
The Best in Quality and Service. The Best Prices in the Industry.

your first  
replaced  
cartridge

## presentation SLIDES & OVERHEADS

**NEW!**  
slides from

Microsoft  
Powerpoint  
**\$5.00**  
each

From your IBM or Mac graphics software including...

- Windows
- Postscript
- Pict
- Autocad
- Target
- VGA Screen Imaging and more...

- Our full creative service can enhance your files or design your presentation from scratch.
- Western Canada's largest slide creation service bureau.

**GRAPHICALLY  
Speaking**

**682-5500**

210-11611 Melville Street, Vancouver V6E 2K7  
FAX 682-1312 MODERN 682-7075

**FAST • AFFORDABLE • CONFIDENTIAL**

**ZEGNA**  
ELECTRONIC INC.

**INTRODUCTORY SPECIAL**
**286-20 MHz**
**\$499**
*suggested retail*

- Intel 286-20 MHz CPU
- 1 MB RAM Expandable to 16 MB on board
- 800858 Upgrade Ready
- 3.2 MB Floppy Drive
- AT IO
- Compact Case/20 Watt Power Supply
- Enhanced Keyboard

**DEALER ENQUIRIES WELCOME**

**WINDOWS REVIEW**

## PageMaker 4.0

*continued from page 55*

with only 73 pages which exceed PageMaker's size, because of the graphics.)

There are ways to get around this problem. PageMaker 4.0 includes a find feature which lets you link several publications together into one. Once these are linked, you can create Table of Contents or Indexes across the entire Book And for Windows and other special built-in features, PageMaker finally lets you set different number schemes such as lowercase or uppercase Roman numerals.

### Table Editing

Tables have always been difficult to create in PageMaker. It was hard to use tab settings to design tables and keep the text centered properly. If not, tables became even more difficult to create. PageMaker 4.0 includes a Table Editor. This separate program lets you create new tables or import them from word processors or spreadsheet programs. Once created, the table can be placed in PageMaker. The problem with the Table Editor is that to maintain the table features usually as created, you must import the table as a graphic. If the table needs editing, you must return to the Table Editor and update the table link in your publication. This method is an improvement over PageMaker 3.0, but it is by no means the best possible solution.

On the other hand, users of Microsoft Excel will be delighted with PageMaker's first real Excel spreadsheet. Spreadsheet is a chart created in Excel can be linked to PageMaker publications. Each time you change the Excel spreadsheet and reopen your publication, PageMaker will automatically update the placed spreadsheet or chart. This implementation of dynamic data linking (DDL) in PageMaker lets us hope this move is to come in future releases.



Page Setup now supports new number formats, but page numbers remain numbered inside publications.

### PageMaker vs. Ventura Publisher

Many of PageMaker 4.0's new features are implementations of controls found in Ventura Publisher. Long document controls, line links to expand lines, ruling lines tied to text, color graphics (graphics linked to text), Table of Contents or Index generation, etc., are all features we have expected to challenge Ventura's long-term leadership in the long document market. While these features are nice to have for special occasions (the times when you need to make a long document and PageMaker is all you have), there are by no means as comprehensive as Ventura's.

Even though PageMaker supports tables, it still doesn't handle table-wide paragraphs. In page and column based controls are not going to be implemented as Ventura's. The ruling lines feature may not be here, but then may be in (especially for ruling lines above graphics) and PageMaker supports only one of them while Ventura supports three.

PageMaker 4.0's pre-proofing. But

the distinction between PageMaker and

Ventura is not obvious. PageMaker is an

excellent product to use for short, com-

plex documents but Ventura Publisher is

still more for creating long, complex

publications. The rule of doing pub-

lishing will apply. Consider your docu-

ments made carefully before choosing your

page layout program.

Overall rating

After adding themselves with Page-

Maker 4.0, its controls and ease of use

are even better than before. It still leads

the publishing world in terms of ease-

ness or versatility layout controls. For

professional short publications layout (2

to 100 pages), an occasional Page-

Maker 4.0. It's fast, looks great on the

screen (sometimes publications look

better on-screen than on paper), and

provides users with sophisticated layout

tools. PageMaker 4.0 definitely gets a

strong rating.

Notes: About is a systems consultant and

author for Business Enterprise. Business

enterprises in systems publishing, systems

implementation and publishing. Starting for

the corporate communications industry. He

can be reached at 604-683-1510.

Unit 110-1150 Maynard Way  
Richmond, B.C. V6X 3H8  
Tel: (604) 278-9130 Fax: (604) 278-9122





## We Make Computers Easy.

### BY OFFERING YOU A CHOICE

#### ALL ARETE MODELS

##### Come With:

- 640 RAM
- Fujitsu 10MB IDEM 20mg, 64K Cache, World Coat Hard Disk
- 6228 & 768 Monitor 26 Pitch
- 101 Enhanced Keyboard
- Tower Case with 350 W P/S CSA
- 1.44 Floppy Drive
- Serial/Parallel/Joystick Ports

##### Made in the Tannin

Arete 386SX-16MHz

**\$1499**

Arete 386-33 Mhz

**\$2199**

Arete 486-25 Mhz

**\$2900**

ALL ARETE Made in Tannin come with 1 year parts & labor warranty

##### Made in the USA

Frees Instruments Chipset

Arete 386SX-16MHz

arete 386-33 Mhz

arete 486-25 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

arete 486-33 Mhz

**Koyan**  
Computer Systems

#### GoldStar 68570

3845K Laptop Computer  
8MB RAM / 40MB Hard Disk

VGA LCD and monitor port

2680 Intel Internal Modem

**\$2099**

#### Ask us about

8-mail and Windows 3.0

731-0553

937-8057

2000 West 4th Avenue

# SLIDES

## FROM YOUR

## IBM PC OR

## MACINTOSH®

682-4686

*FINALLY a super high resolution GENGRAPHICS service bureau specializing in POWERPOINT and many other popular software programs.*

#### IBM COMPATIBLE

- HARTFORD-GRAPHICS
- LOTUS-FREELANCE
- ZENOGRAPHICS

#### WINDOWS

- POWERPOINT
- CORELDRAW
- WINDOWS

#### MACINTOSH

- POWERPOINT
- PERSUASION
- CRICKET PRESENTS

#### MEGAFILES

— AND MANY MORE! —

Full colour slides, overheads, and hardcopy, 34 hr turnaround, plus custom design and production. 8000 line resolution.

# VISION:

Presentations Inc.

Vision Presentations Inc. 200-1280 Burnside Street, Vancouver V6Z 2H9  
(604) 682-4686 FAX (604) 682-4782

## TAKE COMMAND

The POCKET COMMANDER  
Cellular telephone by Fujitsu



Features:  
• 1000mAh Talk Time Battery (30 minutes)  
• 11 High-Speed Answer Calls

Specifications:  
• 400 Channels  
• 9.5 Watts Maximum

Accessories:  
• 100mAh Charger with Handset  
• Cradle and Handset  
• 100mAh Battery  
• 100mAh Charger  
• 100mAh Battery

**FUJITSU**

Available by:

**3D MICRO COMPUTERS**

Vancouver

(604) 873-5595

Fax 873-6552

3D MICRO COMPUTERS is a registered trademark of 3D MICRO COMPUTERS, INC.

ALL ARETE Made in USA  
& Near Warranty  
Parts & Labor

Nationwide & Worldwide

**MITSUBISHI Full Page  
Scanner On Display**

Puzzled by Print-Out-Safe?

So were we.

We took a look at many of the PDS systems on the market right down to the code and found them to be complex and hard to use.

Some would be difficult to use but we found this one to be the best.

We'll help you determine which system provides the right tools for your work in this busy business.

We'll help you implement and maintain your changes in automation.

We understand PDS

We do Custom Programming  
To Fit Your Budget

**HIGH DENSITY 3.5" DISKS**

**\$17.99 / box**

**ARETE**

**COMPUTERS**

3166 W. BROADWAY

731-0552

3166 W. BROADWAY

731-0552

3166 W. BROADWAY

731-0552

3166 W. BROADWAY

731-0552

3166 W. BROADWAY

731-0552

## A Power Feast.

- 25MHz 486 Personal Computer
- 128K External RAM Cache
- 8K Internal RAM Cache
- 387 Compatible Co-processor
- 1MB RAM
- 1.2MB 5.25" Floppy Drive
- 40MB Fast Access Hard Drive
- Parallel / Serial / Games Ports
- VGA Colour Monitor

**\$ 2650 00**

**AMI Technology Corp.**  
1430 W Broadway  
(Granville & W Broadway)  
Vancouver B.C.  
V6H 1H6  
Tel: (604) 681-1888  
Fax: (604) 681-1788

# AT&T, the OSF, and the course of UNIX

By Douglas M. 7th, MIT/AT&T  
by Richard Stokes

In May 1986, seven of the most influential Unix developers, including IBM, Hewlett-Packard, DEC, and Compaq computer maker Research Inc., announced the formation of the Open Software Foundation, or OSF. The stated goal of the OSF is to rapidly develop an alternate systems software standard for Unix. The catch, AT&T, the creator and

licensee of Unix, has refused to join the OSF, and in fact, is developing a new version of Unix with Sun Microsystems.

To us, the danger of why these large computer companies may cut off Unix from a significant segment of the Unix market is in rebelling against the corporate monopolized control of Unix. AT&T is at a necessary to go back to the beginning

Unix was originally made to be a multiprocessor standard, with its licensees having equal access to a growing operating system which would be monopolized and improved by AT&T to take advantage of the local innovations at computer technology.

But at time went on, AT&T did not consider such a good record of keeping Unix up to date. This resulted in Unix decreasingly known and eventually Unix ceased to exist in most forms. These Unix developers weren't that compatible, and Unix users were forced to fragment.

Things remained stable for a while, but as innovations in user interfaces, graphics, and Unix itself emerged, the need arose for a new version of Unix which would both make advantage of these innovations and merge these "Unixes" into a coherent, well-defined standard.

Seeing this need, AT&T announced that it was making work a system, in Unix Version 5.4, which would merge Berkeley Unix 4.2/4.3, AT&T Unix Version 5.3, and Microsoft Unix, therefore establishing a mixed Unix standard, and would also use new graphics user interface for Unix, called Open Look. Our most direct Open Look was developed by Sun Microsystems, another developer helping AT&T make its new Unix. This means that Sun would become the most important Unix licensee (and the most profitable).

Another detail: Sun was also developing the SPARC, a new RISC (Reduced Instruction Set) processor, and AT&T had announced that Unix Version 5.4 might take advantage of its special features.

So faced with the problems of Sun being allowed to set the course of Unix as an exclusive partnership with AT&T (thereby becoming the leading Unix company), as a potential, prepotent Unix threat came along, these leading Unix vendors took the only reasonable option: instead of doing passively by while AT&T and Sun level supply over when they decided to make their own Unix.

Hence the Open Software Foundation, an independent corporation founded by its supporters that would derive a comprehensive Unix standard covering the areas of graphical user interfaces, enhancements to Unix, and other aspects of Unix. After development of their platform, the OSF would look at us with the thinking that they felt were lacking from AT&T. These things included:

- 1) Reasonable, stable licensing terms
- 2) A well-defined standard
- 3) Rapid reaction to changes in (and across) specifications
- 4) A hardware-independent Unix standard that would evolve as a simpler, more rational basis than AT&T Unix had.

After being the OSF's alternate Unix standard has been developed, all of the OSF's member companies will support their entire Unix product line to it, in order to further support it. And as each member of the OSF has a greater share of the Unix licensee market than AT&T (and the OSF is quickly gaining new members), the united force of these Unix vendors would be great enough to exert control at Unix away from AT&T.

AT&T has not reacted favorably to this, preferring the OSF's plan, and joining other industry members in making a variety of moves to what the OSF could accomplish. But surprisingly, Sun Microsystems itself has reconsidered joining the OSF. In order to end all speculation about their chances of success, the OSF immediately began development on its Unix.

Five on their agenda, you is standard Graphical User Interface. The OSF's requirements in this area were that the interface be based on X/Windows, a standard Unix windowing system, and that the interface be completely hard.

Continued on p. 29

## ATARI: The CAD Workstation That Outperforms All The Others In Power, Price & Ease Of Use.

FULLY GXT COMPATIBLE. ATARI OFFERS CAD THAT'S FASTER, LOWER PRICED & EASIER THAN AUTOCAD.

The most powerful 68000 based personal CAD workstation in years now runs Atari's TT series computers. Atari redefines the standard of professional CAD systems at a fraction of the cost of other platforms.

### POWER WITHOUT THE PRICE

If you're been thinking of expanding your personal CAD capabilities, or are setting up a CAD system for the first time, then it's definitely your best option. Not just in power and flexibility but every made anything you're currently making. And you'll have no trouble getting files between your Atari and existing equipment, thanks to Atari's ability to read and write 800k disks. Best of all, you'll get the same system for what some CAD platforms would have you spend on software alone.

Your staff will appreciate Atari's straightforward, intuitive user interface. It's mouse - driven, graphic operating system is built directly into ROM, making it one of the simplest computers to learn. That means a low learning curve for both system and software, allowing your employees to get up to speed quickly, confidently and profitably.

### THANKS FOR THE EXCESS MEMORY

The TT's power doesn't stop at 4 Mbp, either. Its cost readily equal your TT's memory capacity is an amazing 26 megabytes - enough to handle the heaviest files. That's an option you won't find on the everyday CAD machine.

### YOU CAN'T BLAME OUR SYSTEMS

GXT Systems can put together a CAD package to suit every need and every budget. Choose from a variety of professional programs for the AutoCAD. It has all the muscle of AutoCAD, but is easier to operate and actually runs on the faster.

Your investment will fit in cost efficiency, too. With an easy running AutoCAD, you'll be able to offer industry standard services. get have a competitive advantage over companies with CAD systems costing thousands more.

### LEASE A SYSTEM FOR AS LOW AS \$25 A MONTH!

We could go on and on about the Atari TT and AutoCAD, but we'd rather have you call and arrange a demonstration. Along with hardware and software, all our packages include training, support services and installation. So, whether you're looking for system expansion or a stand - alone workstation, call us today and we'll have only Atari can make to make CAD power this affordable.

607-8527

**GXR**  
G R A P H I C S



► Watch our upcoming ads for news on Atari Unix, Multi-Media, DTP, Networking and more!

## Canada's CADalyst Magazine Sold to U.S. Firm

by Allan Stark

A Vancouver publisher that over the last seven years has become the world's widest read monthly magazine in the CAD (Computer Aided Design) industry takes over last week by a U.S. publishing firm based in Eugene, Oregon, for a reported \$2 million.

CADalyst magazine, from CAD's office, with a monthly paid circulation of 40,000 copies at \$2.00 per copy, permanently closed its offices on Broadway at Burrard that employed 80 people, April 15.

One staffer had just returned that day from a month-long vacation and found the news for the first time, according to David Cohen, senior editor who made the magazine's sale a condition of a sabbatical part of his own U.S. stay.

Founder and former editor Lorne Johnston, who started the publication in a bi-monthly magazine seven years ago in April, sold it to Amer Publishing Corporation because, "I wanted more financing (than I could attract) to expand into the markets that were opening for the magazine," Johnston says. "This financially allowed what I had to do."

With 15 magazines and yearly revenues of nearly \$30 million U.S., Amer Publishing is the largest magazine publisher in the Pacific Northwest, including Washington, Idaho and Oregon.

After sales offices in Chicago, San Diego, Dallas and Seattle, the new one located at the Vancouver market now with a new system edition in the magazine and an advertising office out of Center for that market, says Cohen, who will be managing Burlington, Washington and

telecommuting from there. CADalyst is Amer's first post-construction magazine. It may offer professional publications with controlled circulation.

Over the past three years, CADalyst's growth rate has been 60 to 80 percent annually. That incredible increase is expected to ease with Amer's influence. According to Cohen, "I have concerns with whether this is a major subscription drive. We're projecting an increased circulation to about 10,000 by the end of this year and a limited demand a year from now."

Johnston had been actively looking for a CADalyst buyer since last September but had not started meeting interested publishers until the first of the new year.

What are his new plans? "I have a conceptual program around reality that has to do with the theme 'This is what is virtual reality is evident in the April issue of CADalyst, which focuses on the new like 'Dancing Virtual Reality,'" in an interview with a leading virtual in virtual reality research, "Moving Reality," a report on San Francisco's first annual virtual reality conference and "Against the Ropes," in which the same developers of Autodesk "CyberSpace" discuss the future. CyberSpace is a type of virtual reality, also known as computer-generated reality, or the notion of a user entering into a computer and interacting with it. This term was coined by Vancouver resident William Gibson in his first science fiction novel, *Countdown*, for which he won the Hugo, Nebula and Philip K. Dick awards. The current CADalyst business two Gibson-generated features Gibson also writes access plans.

**Unix continued from p. 58**  
over-independent. The OSF listed 26 organizations who are products it would consider candidates. Among the ones considered were Hewlett-Packard (New Wave), Digital Research (RISCOS), Microsoft (Preemptive Manager), Carnegie-Mellon University, and Sun Microsystems' Open Look interface. It finally decided to create its own interface, called OSF Motif, by combining the Preemptive Manager's "look and feel" with features from other UNIX quality EBC and Hewlett-Packard.

The OSF does consider other members of Unix a should have its operating system on. After considering AIX (IBM's version of Unix) and Berkeley Unix, it finally decided to create the OS a combination of other systems. While it was Unix, a subset of Berkeley Unix that supports multiprocessing, for its main kernel, AIX is used for most system functions. The OSF is currently focusing on shared and distributed processing (which allows you to run one copy of the same program on two or more computers at the same time), and has been considering several system standards.

The OSF estimates that it will have to allocate Unix standard ready for commercial distribution before 1993, and has already sent beta copies of its

operating system to its member companies. However, as AIX is not shipping Unix Version 3.4, many computer vendors are choosing to support standard of the OSF's Unix. Now that AIX has open all on Unix Software Division as a separate, autonomous company, AIX's Unix is also beginning to gain new momentum in the computer industry. However, AIX's Unix may have to rely on much support for Open Look, even the companies who use AIX's Unix are beginning to look OSF's Unix as the standard (1) Graphical User Interface for Unix programs. With both major publishing support, the question becomes whether AIX's Unix will be able to hold its own OSF and dominate the market of Unix, or if a group of Unix vendors will be able to create enough support to defeat AIX.

With the release of OSF's, the companies industry (including vendors) are looking at establishing operating systems, and unified Unix, with no powerful capabilities. As such, Unix has become very important, having the potential of successfully guiding the microcomputer industry into the Enterprise. Now the time is not only if Unix can overcome the IBM, Microsoft, and OSF's challenges, but also whether it can establish the dominant position it needs to establish a new standard.



ULTIMATE DESIGN TOOL

# AMI



## We sharpened our pencil on .....

Monitors		Math Co-processors	
Over 100 display models	1,200	286/386/486	1,200
Supports both analog/digital	1,200	286/386/486	1,200
Supports both VGA and SVGA	1,200	286/386/486	1,200
Supports both 15" and 17" monitors	1,200	286/386/486	1,200
Printers		Misc	
Over 100 models	1,200	286/386/486	1,200
Supports both dot matrix	1,200	286/386/486	1,200
Supports both laser and inkjet	1,200	286/386/486	1,200
Supports both 11" and 14" paper	1,200	286/386/486	1,200

### AMI Technology Corp.

1450 W Broadway  
(Kingsway & W Broadway)  
Vancouver, B.C.  
V6H 5H6  
Tel. (604) 733-7880  
Fax. (604) 731-7884

AD #16

# Come open our Windows!

On June 27-28, come join the brightest minds in the computing industry at "Windows at Second", the 19th Annual National Conference of the Independent Computer Consultants Association.

The conference will offer a keynote address by Microsoft chairman Bill Gates and continues with three solid days of opportunities to meet leading industry leaders, learn at workshops on technology, business and personal

growth issues as people like noted management consultant Howard Shuman, Sam Albert, chairman of Forrester and a leader in computer consulting industry, and James Oliver

Insider at ICA. The conference is open to everyone. From ICA members to computer professionals to anyone with an interest in computing. It's an unique occasion to learn, to network and to exchange information. Don't be left on the outside looking in.

**What:** The 14th Annual Independent Computer Consultants Association National Conference

**When:** June 27 - 28, 1991

**Where:** The Sheraton Hotel, Suite 1, Washington

For more information and a registration brochure, call 202-694-0797 or write: P.O. Box 200000, Washington Office Building, St. Louis, MO 63120





## WINDOWS REVIEW

While I'm on the topic of formats, Professional Writer Plus' Layout distinguishes itself from other word processors in its inclusion of the margins, subscripts, borders and footers and a thoughtful slant of the paper, all of which streamlines setting up a document. Columns (the kind of word processing columns), are standard in this program. You can have up to eight columns set up automatically in the Layout mode, and you can choose column widths in the borders and footers (though why anyone would want to do this, I don't know). While Professional Writer Plus is missing an automatic table-of-contents, such as you could find in Word for Windows, you could, with much fiddling, replicate the automatic format to use as a table.



## Grammar

Grammar is for Windows is included in this program, an on-screen tool right next to the spell-checker and thesaurus that can be executed from within the word processor. After the grammar-check is complete you can exit Grammar, and it takes you back into your document. It would be advisable for other word processing packages to follow their example. I have used Grammar before with Word for Windows and found it that annoying, annoying and confusing like a very nervous finger ballet. (For a more complete review of Grammar, for Windows see my review in *The Computer Paper*, August '90, p. 26.)

I remember that before I got my spell-checker I thought my spelling was decent, but I was wrong. The same thing happened when I got Grammar. I was not inflexible. If you think you don't need a grammar-checker, you're also probably wrong.

I had some difficulties getting the grammar-checker to work in the program, as the options was greyed out in the menu. Software Publishing's technical support was a little surly, so this had never happened to their program before ("Honey") so it would likely not happen to you. But, if it does, get it straightened out with them in a bit.

## Network

Professional Writer Plus includes a front-end E-mail for use with Novell NetWare. With the right bits and pieces of Local Area Network software, this feature can make sending E-mail packets as just a matter of hitting the buttons from a menu bar. The E-mail program can send graphics and spreadsheets along with the documents through the network, so that the documents look the same in the receiver as it did in the sender. The E-mail can be used as part of a Wide Area Network (WAN) with the help of a gate-

way program to the TUCOF system, which links all computers together by mainframe computers.

Another feature that makes this program very useful is network use or sharing of these bits by using a site that still can be found in the best of automated offices. A user can save a file once that will propagate your message to another user's machine.

## What They Left Out

Professional Writer Plus has done a good job, none of this product, but

there is room for improvement. Sure, you get good value for your money, as Professional Writer Plus is a five-hundred dollar less than the most popular program, (which is WordPerfect, if you haven't heard already), but there are a few features that are conspicuously left out that I can't deny, like automatic table of contents, automatic indexing, outlining (which gives the user a complete view of headings), and printing (word processing) also had the spell-checker less than that others, so it would not give a list of suggestions for

most spelling errors it came upon.

Documentation can be improved on, as the alphabetical manual could use a comprehensive comparison manual that explains procedures like the installation more clearly than the installation documents specifically because of the problems in getting Grammar to work, information on the automatic would have been good. However, the Grammar manual is adequate and the Local Administrator's Guide was a thoughtful addition.

## THE LEGEND LIVES ON...



**LEGEND 2** is the second generation of the successful **LEGEND** Monitor. Without sacrificing any outstanding feature of its predecessor, **LEGEND 2** comes with an extraordinary auto-scanning feature. By detecting the desired VGA mode, **LEGEND 2** adjusts the display size on the screen automatically. The auto-scanning feature enables **LEGEND 2** compatible with existing EISA, MCGA, Super VGA, and VGA standards. The new **LEGEND 2** Monitor also equipped with the replaceable HRC picture tube which gives you razor sharp 1024 x 768 pixels 0.28 dot pitch and excellent image quality. However, the best of all is, with all the advance features, **LEGEND 2** still maintains an extreme competitive price. Please call now to learn more about this superior monitor.



## Pal Systems (Canada) Ltd.

Vancouver Office  
118-10962 Columbia Road  
Richmond, B.C. V6V 1K9  
Tel: (604) 275-1855  
Fax: (604) 275-8288

Edmonton Office  
501-5000 Street  
Edmonton, Alberta T6C 6P6  
Tel: (403) 441-1072  
Fax: (403) 441-8888

Toronto Office  
2nd 5-170 Alton Road  
North York, Ontario M2H 6P6  
Tel: (416) 491-8000  
Fax: (416) 491-8008

Calgary Service Center  
Computer Market  
Bay 128 1801 11th St. S.E.  
Calgary, Alberta T2C 1P7  
Tel: (403) 243-8800

Desktops ranging from  
"The new and improved" desktops  
to the latest desktops.

### A Professional Finish

Professional Write Plus has all the features of a word processor that we've come to expect of course, such as line auto-indentation, importing and saving of graphics, online help, plus the addition of Grammar, E-mail, and graphics templates. One feature I absolutely adore that Word has an option of up to four levels, good for when you are scrolling around and need to undo everything. With a conventional word processor that undoes only the preformatted, you could

have to remember not to use the document, and if, then bring it back and find your place.

The emphasis on capabilities of this program including text, graphics and multimedia, while not an innovation promoted by Software Publishing at a local user's group meeting, are nevertheless very impressive. I was able to take a Word 5.0 document with style sheet attached and convert it to Professional Write Plus, and it kept at least 90% of the style and the fonts.





**BUDGET WISE**

**Ultra Talkman 828**

**Mitsubishi 88X 1088**

**FUJITSU**

**8000H 428**

**ALL PHONES 3 YR. CANADIAN WARRANTY**

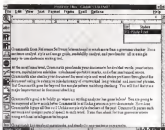
**Best Price in Town**

**CAMPUS COMPUTERS**

243 Victoria Parkway, Vancouver, B.C. V6E 1M5  
 604-681-1100 (In Vancouver, 778-1100 or 1-800-363-2222)  
 Tel. 322-4040 Fax 322-4030

**CANTEL APPROVED**

\* All phones must be activated by 3/31/91 or 3/31/92



Though the emphasis seems only half there, Professional Write Plus is still an improvement over other WPs that don't even try to include extra-like capabilities in their conversion programs, which means you have to reformat the document, or even worse, a more unpleasant fix it in the original program.

Professional Write Plus includes graphics support for the most common formats, i.e., GEM, Clipart, PCL, MAC, HP PCL, and Postscript. Once supported

into the program, the graphics are then stored directly by the Windows command, and can be processed for clipping within the program's standard tools.

Well I would write to my Microsoft Word 6.0 and work on long and has introduced Professional Write Plus, if I had any way to open on my hard drive. When we were installing this program on the second computer (a 386), the program kept bringing me more space. On my 386 I'm comfortable with 2MB free space, if it's not too far from. Of course, this is true of any Windows 3.0 program on an AT.

### New & Improved Version 5.01

"Thanks —again  
**HELP Payroll,**  
 for even more  
 flexibility without  
 complexity."



### HELP Canadian Payroll

has now & improved flexibility without added complexity

### HELP Canadian Payroll

enables over 100 Canadian payroll packages with:

- an easy-to-use, simple to use & friendly interface
- integration to most major & payroll packages
- 100% online delivery & 100% online delivery
- ability to print out only your employee cheques from your Revenue Canada

Canadian cheques, T4s and 401Ks as well.  
 No limit to the number of employees or companies you process.  
 HELP Canadian Payroll also is compatible with most accounting software you own for over 5 years and has over 1,000 installed users. So you can buy with the confidence that it's not another payroll system. Call 800-752-5252. Tell us your friends they are probably already using HELP Canadian Payroll.

For more information call HELP Software at (800) 435-6266  
 5467 Kingsway, Burnaby, B.C. V5H 3G1

\* Credit inquiries are welcomed

**NEW FLEXIBILITY — SAME PRICE — ONLY \$349.95**

LEARN THE ART OF...

**Press'ion**

**QuarkEd**

Learn to

When it's time to learn, in Quark XPpress, the graphics designers & electronic publishers will find a great way to learn. And when it's time to learn, in Quark XPpress, the graphics designers & electronic publishers will find a great way to learn.

946-6443

**Phoenix**

Studio Inc.

800-752-5252 (toll-free) Quark XPpress, Inc.  
 1000-752-5252 (toll-free) Quark XPpress, Inc.

Carolyne Lefebvre-Smith is a freelance writer specializing in computers. She also contributes to the Vancouver Sun's high-tech section.



## MACINTOSH REVIEW

# MacWatch

## Macintosh product reviews

by Graham Barnard

### Claris CAD 2.0

**Product:** Claris CAD 2.0  
**Manufacturer:** Claris Canada, Suite 202,  
250 The Esplanade, Toronto, Ont. M5A 1Z  
(416) 541-3471  
**System Requirements:** Macintosh Plus or  
up with 1MB RAM, hard disk, System 8.0 or  
later, or PLUS, Model 128 Plus

The current version of the Mac's most mainstream 3D CAD application adds over 100 new features and a unique Graphic Guide, which assumes your mouse motion relative to the screen and tells you where a mouse action will place an object accurately by displaying guidelines, guide points and a cursor that displays small icons when it moves over object handles, intersections etc. The Graphic Guide helps Claris CAD 2.0 be a considerable balance between powerful features and ease of use. Performance is good, most engineers will find that Macintosh CAD 2.0 is one of the PC's closest and 3D to 40 percent faster.

Hotting "hotkeys" palette (see below) provides quick, one-clickable access to commonly used drawing utilities. Online help is included, as are extensive tutorial materials.



The property palette (called "selected" as that, for their time, is valid).

In addition to the Getting Started booklet, User's Guide, Quick Reference and New Features Guide, the package includes a 14-minute "Tutorial" videotape and tutorial manual, plus free support on Claris' Technical Hotline.

The package does not directly support DOS and IGES drawing formats, but an optional US\$299 Graphics Translation is available that allows import and export of these industry-standard file types.

### QuickKeys 2

**Product:** QuickKey 2.0  
**Manufacturer:** C/S Software Inc., 18344 Jolly Road, P.O. Box 10101, West Des Moines, Iowa 50328 (515) 224-1880  
**System Requirements:** Macintosh Plus or up with System 8.0 or later installed  
Price: US\$59.95

If you're like most Mac users, you'll find yourself doing the same actions over and over. You may change type styles or open the Clipboard and set the proper printer. All of this takes time, more

time than many realize—and more. What if you could do a whole series of actions with one keystroke or mouse action? Not only could you save time, but it would free your mind from the annoying clutter of repetition. QuickKeys 2 takes over this monotony and lets you do more creative.

Despite the fact that every Macintosh ships with a mouse, mouse ability (like a screen magnifier) underpowered Macintosh. QuickKey has offered superior features and performance. With version 2, the mouse ability gets even better.

One of the most powerful features of

QuickKey 2 is its ability to teach your actions, create a sequence of QuickKeys, and assign to it a single keystroke. You can then repeat your actions at any time by pressing the keystroke. QuickKey 2 provides two methods for recording your actions: "Record Sequence" and "Record Real Time."

When you select "Record Sequence," QuickKey 2 records each of your actions in an appropriate QuickKey. If you need something to do, on a window's title bar and then drag it, QuickKey 2 creates two QuickKeys—one for each action. This makes it possible for you to

Continued on p. 44

## Macintosh LC Colour System



Like all Macintosh™ computers, the Macintosh LC provides users with the benefits of unsurpassed ease of use, thousands of graphical applications that work well together, built-in networking, and an easy growth path. This combination significantly differentiates the Macintosh LC from the competition.

Though priced similarly to many leading 68000-based systems, the Macintosh LC provides performance comparable to that of 80386 machines (Source: Ingram Laboratories Benchmark Report, July 1990). Moreover, the Macintosh LC provides all the advantages of Macintosh.

The Macintosh LC can support an Apple IIc card which enables you to use nearly all Apple IIc software. While in the Apple IIc mode, the card supports not only 5 1/4" and 3 1/2" drives, but also printing to a LaserWriter® II over LocalTalk™.

This solution enables customers to use thousands of existing Apple IIc applications and protect customers' investments in existing Apple IIc software and hardware.

The Macintosh LC computer's ability to take advantage of a wide variety of general productivity applications, support for LocalTalk™, EtherTalk™ and other network environments, and optional ability to run Apple IIc software, make it a strong solution for a variety of markets, including Education, Business, Government, and Home.

For the home, the Macintosh LC provides an affordable, color capable computer for general productivity, education, or entertainment. In addition to general productivity applications, you can use the Macintosh LC for office work performed at home, management of personal finances, management of personal databases, instructional programs or games for home education, creative interests using music, graphics, and programming.

For more details contact your nearest Advantage Computers location.

Suite 148  
4664 Longwood Way  
Burlington NC  
7542 5775  
252-5864

5th Floor  
121 Oliver Street  
Vancouver BC  
V6C 2G4  
604-6227

Suite 300  
705 Burnaby Road  
Vancouver BC  
V5H 1E2  
604-6999

**ADVANTAGE**  
Computers Ltd



of the sequence, adding additional actions or pauses.

Where possible? "Record Real Time," *QuickKeys* 2 records much of your actions exactly as you perform them. *QuickKeys* 1 does not convert your actions into *QuickKeys* when you make a "Real Time" recording. As a result, you cannot edit it.

Most Mac users eventually want to have keyboard commands on auto-pilot, especially during keyboard-intensive word processing and database chores. *QuickKeys* can help here, too, by

allowing you to assign new Command Key equivalents to most commands. You can even use it to change or even deactivate key commands.

*QuickKeys* can assign legends to specific programs, or, ultimately, as shown here, to

your mouse. I have used *QuickKeys* to avoid the clicking the *File* key (and it is conveniently positioned so close to the *Shift* key on the Mac's extended key-



board. In many programs, the things up an extended *File* dialog, which must be closed before work can be resumed.

Using *QuickKeys* 2, I can reassign the function in *Shift+File* or *Control+File* as I please. *QuickKeys* can also be used to assign functions to the keyboard's *Alt* function keys, which Apple's utility completely dismisses.

Because *QuickKeys* has a small base, it is well supported by other packages, too. The latest version of *Alpha Free Hand* (see below), for example, includes a demo version of *QuickKeys* 2 and a set of macros that can help streamline that program's operation. (The *QuickKeys* 2 demo is a full working version of the program, except that it only works for 15 days on the date of installation. It is also available from other sources, such as *Compuserve* and *Online*.)

The only drawback of *QuickKeys* is a slight but noticeable slowdown in the speed at which the drop-down Apple menu appears. On a Mac Plus with 1 MB *QuickKeys* installed, the delay is usually five seconds, but considering all the time *QuickKeys* can save you, that's not too great a price, is it?

## Personal Press

**Product:** Personal Press 1.0  
**Manufacturer:** Jason Beach Software, a subsidiary of Alpha Computers, 30 St. Clair Ave. West, Toronto, Ont. M4R 1A1 (416) 525-6246

**System Requirements:** Macintosh Plus or SE  
**Price:** US\$220

Remember when *Alpha*'s purchase of *Bechtel* was strongly criticized by the press for the potential of DTP packages called *Personal Press* that the company was then working on. Now that the package is out, how close it stands up to *Alpha*'s highest offering, *PageMaker*?

For starters, *Personal Press* features free rotation of graphics and text, a spelling checker and thesaurus, even check-spelling support (including English-English) and even some of the brightest and most colorful graphics (no page) layout modules are provided for virtually all other popular Mac word processing alternatives. *PageMaker* text and graphics can also be imported.

The program supports the notion of "jump" modules, allowing new features to be added at any time.

*Personal Press* from sports an extensive interface that can allow the company calls "modules" to provide interactive feedback when performing key operations like importing text and graphics, aligning objects, scaling, etc. You can attach the electronic equivalent of post-it notes to your document, and keep commonly used elements in an on-screen *Workbench*.

Such modules as auto-align/center and text wrap around graphics are handled well by the program, which is less so the personal module and reliable in my tests. (In the *Macintosh DTP Forum* on *Compuserve*, there is a *Personal Press* topic that describes some minor bugs with the program's *Table Maker* and *Text Settings* dialog box options, but I have not been troubled by them. The program also prevents some of the program's elements, such as its

BYTE COMPUTERS

## Free Spring Cleaning



Free "Spring Cleaning" of your Apple® Macintosh™ by our service department  
**Regular Value (\$55.00)**

Bring in this coupon into one of our stores and get a **free tune-up** and a **free Byte Computers Baseball Cap**

## BYTE COMPUTERS

2151 Burrard St.  
Vancouver, B.C.  
(604) 758-2181

2001A Douglas St.  
Victoria, B.C.  
(604) 383-4485

## BYTE COMPUTERS COUPON

ONE FREE MAC TUNE-UP  
ONE FREE BYTE BASEBALL CAP

Offer Expires May 31, 1991

Apple and the Apple logo are registered trademarks of Apple Computer, Inc.







## MACINTOSH REVIEW

proved. FinalDraw! (Screen) is an expert of lines effects such as shadows, patterns, outlines, zoom, text, etc., all of which are now visible as you work. Only the custom PostScript file can not previewed, although the method for increasing them, too, has been improved considerably.

## Screen Glitches

Along in the program occurs when a Zoom Text block containing of two or more lines zooms to a size often times 100% (see below). Strangely, even a 1% change in the "zoom in" value produces a radically different screen display.

Version 3.0 improves FinalDraw! a lot, adding considerable support for multiple drawing layers. Layers can now be zoomed, and moving objects is a lot easier to input as an object in dragging the mouse around in the Layer list. When it comes to printing, layers can be specified as non-printing, and the program can now apply traps by specifying how lines or fills automatically. The program ships with one printer description files that Aldus says will maximize consistent output patterns on color separations, plus extensive documentation including booklets called *Tips from the Pros* and *Aldus Professional Color Printing*, a guide to color trapping, color-separation adjustments



Scaled and zoomed text on multiple lines will zoom correctly in this screen when the "Group Transforms as a Unit" option is selected.

When the zoomed text is moved around on the screen, baseline angles are manipulated to the bottom line of text on the screen. (Printing is not affected, and the program never crashed or malfunctioned in other ways.)

Additionally, when the resulting block is moved around (unlike other blocks of text), the text is not moved and the screen is locked. Luckily, a work-around is easy: just create a group and select "Element only." Click on the "Group Transforms in a Unit" option and the block will zoom, scale and rotate all text properly.

Another new feature in 3.0 allows text separated by a carriage return to have no different positions when it is moved to a circle. Half the text comes along the top and half along the bottom of the circle automatically if the two text segments are separated by a carriage return.

Version 3.0 does a big job that has plagued me in the past. In temporary situations, fonts on version 3.00 sometimes required strange handling when between curves lines, despite the fact that they appeared correct on-screen, and were also formed or otherwise transformed. Once these format guides had been corrected, then incorrectly spaced characters would print that way from different computers, with different copies of the Font, meaning different copies of TrueType files. Luckily, Aldus does that previously contained this behavior now print correctly under FreeHand 3.0.

Several important new features appear in this version, including support for the improvements and separation of full-color 16-bit TIF graphics as well as EPS, PICT, PICT II, black-and-white and grayscale TIF and postscript images.


**DOVE**
**FAX MODEM 24/96**

*DoveFax*
*Introductory  
Spring Deal*

- ✓ 2400 Baud modem / 9600 Baud Fax
- ✓ Includes management software
- ✓ On-going service and support
- ✓ Auto redial / Auto answer
- ✓ Quick fax status
- ✓ Hayes Compatible
- ✓ One year warranty

**\$379.99**

**Canon BJ-10e**
*Working to Improve Your Image!*

- Letter quality - 360 x 360 DPI
- So Quiet, you'll hardly know it's there
- One Year Warranty

**GREAT FOR LAPTOP  
OR DESKTOP!!**

Macintosh  
Authorized Canon  
Dealer

**\$449.99**
*Only 25 available!*
*Authorized:*

Aldus • Aldus • Canon • Green Plains • Lexmark  
Abacus • Canon • Kodak • Radius • Sharp • SuperMac

**SHARP  
IQ-7300M**
**ELECTRONIC ORGANIZER**
*Electronic  
Organizer* **64 KB**
**Features 7 Major Functions**

**\$289.99**

*The Oldest Organizer Quickly and  
Easily Controls Personal  
Information and Time Management*


**Your Macintosh Solutions Centre  
Software, Hardware, & Accessories**
**MAY - SUPER SAVINGS MONTH!**

Desk Express II .....	\$ 79.99	After Dark Screen Saver .....	\$ 34.99
Desk Doctor .....	79.99	Typing Tutor .....	39.99
30 Bulk Disk .....	34.95	Index & Search .....	100% OFF
10 Bulk Disk .....	7.99	Accelerator .....	249.99
1 MB Screen .....	64.99	10 MB 141 Quantum .....	619.99
Target/Mac Bug .....	79.99	QuickDraw Super Processor .....	149.99

**ASK ABOUT OUR WEEKLY IN-STORE SPECIALS!**

**TOMORROW'S GRAPHICS**  
**YOUR COMPLETE SERVICE BUREAU**

3615 Kingsway, Vancouver, B.C. V6R 3M1  
 Phone: (604) 435-4023 • Fax: (604) 435-9447

Care &amp; Feeding of a Computer User

# Take an exercise break

**Learning Software is Easy  
with Sams All New  
10 MINUTE GUIDES**



#### 10-Minute Guides

These new software guides have been designed to teach beginning users "how to" get up and running quickly. The 10-Minute Guides contain 10-20 short lessons, each of which can be completed in 10 minutes or less. Texts also contain "Timesaver Tips"—offering shortcuts and hints, "From English" definitions, and "Puzzle Button" troubleshooting to identify problem areas and learn how to solve them. Two-color layouts, easy-to-identify icons, and plenty of illustrations make these guides easy to use and follow.

Look for these and other Sams titles at your local computer book retailer.

For your free catalogue call (800) 466-2518.

A well-designed work station can help prevent fatigue from occurring. But simple exercises for just a few minutes a day during office hours also can work wonders. With just a little activity you can stimulate circulation, relax a bit, and improve your sense of well-being.

You don't need to go anywhere to do these exercises. So choose the ones you feel most comfortable doing at your desk and do them often. It's best to start with a breathing break.

#### Breathing Break

Take time to turn deep chest breaths, inhaling through your nose and exhaling through your mouth. Close your eyes and concentrate on your breathing. Let your shoulders drop, drop your chin to your chest and feel your neck relax.



#### Vision Break

Our eyes are important accessories to our brains. Often, close study work can contribute to tension which becomes chronic if not relaxed. These basic exercises can help prevent eyestrain, a common cause of headaches.

1. Blinking and tearing are two natural responses to tension. Tension does not cause dryness of your eyes, so, as mentioned in this following supplies a natural supply and lubricates your eyes.

2. Give your eyes a distance rest. Read once or twice, look away from work documents and the VDT. Focus on an object 20 feet away or more.

3. Gently rub your hands together then, making circular motions, gently place palms over both eyes. Without pressing down on your eyes, make sure no light comes in. Hold palms in place for 30 seconds at a time.

4. While sitting, roll your eyes to the left five times, then to the right and five times. You can also do this exercise with your eyes open.



Prices subject to change without notice. All products and brand names are the trademarks or registered trademarks of their respective owners.

## HIGH TOUCH

**Eye Massage**

The Chinese have known for centuries that daily eye massage can relieve visual tension. When you find yourself up to your eyeballs in work, close your eyes for a moment and try these:

- Place gently with your thumb and forefinger on either side of the bridge of your nose, massage up and down three times.
- Use both thumbs to press gently (or balance your eyebrows, hold for three to five seconds.
- Place index or middle fingers on top of your closed eyelids, just under the center of your pupils. Massage in light circular motions eight times.
- With your thumb spread the side of your index finger, apply gentle pressure above the eyebrows and at several points around bridge.

**Hand and Wrist Relief**

- When typing, position your wrists in an even line with your forearms, hold your arms at 90-degree angle from the elbow, or drop your elbows slightly if that's more comfortable.
- After a few hours at the keyboard, stretch arms out to your sides and over your head. Massaging hands and wrists will relax tightened muscles and improve circulation.
- Holding your wrist or your opposite hand, massage by pressing muscle against the bone.
- Use your fingers and thumb to massage the inside and outside of your opposite hand. Massage the space between fingers, and each finger toward the nail.

**Limbering Up**

Sitting for a long period forces many muscles into a fixed position that can cause fatigue and stiffness. The following exercises loosen up these muscles. Warming and stretching is also important. Try to walk and stretch in instead of escalators or elevators whenever you can.

**NECK RELAXER**

While in sitting deeply, slowly tip your head from side to side three times. Bring your head back to upright, then turn it, looking over your shoulder three times to each side. Drop your chin to your chest and then tilt back as far as you can.

**MOCKY-SPOOF BACK**

Hold your right elbow with your left hand. Bend your head backward and your left shoulder. Hold the stretch for five seconds, then repeat with left elbow.

**BACKSIDE**

Interlace fingers and fit arms overhead, keep legs elbows straight, firm arms as far back as you can. To stretch sides, slowly lean to the left, then to the right.



Reprinted with permission  
OGLi GlensGuard Products  
Telephone 1-707-645-8440

Dialing SOME BBS  
Status: ....

Still Busy

Next time this  
happens to you  
remember ...

**MIND  
LINK!**

*There is probably a line free*  
21 simultaneous users  
and more lines coming!

**BC's window on the world**

Exec: 576-1214, 683-1214, 836-3231  
Voice: 576-6172 Fax: 574-3492







## Professional Video, Animation & Imaging Systems



for Transfer & PC-VCR

**\$1195.00**

Compatible w/ IBM

**A full range of JVC Imaging Cameras**

### SINGLE CCD

TK-870U ..... \$1495.00

TK-1070U ..... \$1695.00

5-CCD

KY-F300C ..... \$5995.00

1604 x 1204 DATACAM ..... \$6995.00

For Use With MATRICE ELUM 18, VEGA, MUYSTA



**PC-VCR by NEC** **\$2995.00**

• RS-232 CONTROL

• FRAME ACCURATE

• DESKTOP VIDEO & TAPE LIBRARY ARCHIVING

• INTERACTIVE TRAINING & EDUCATION

80286

**PLAN Animation Control Systems**

• FRAME ACCURATE OUTPUT CONTROL... *Quotation on Request*

CONTACT SCOTTY HENDERSON FAX: 604-4347

## Commercial Electronics Ltd

1325 Burrard St., Vancouver B.C. V6Z 1G7 Tel: (604) 693-5525

## NEWSBYTES

*Continued from p. 71*  
in a matter of feasibility.

Despite queries following from a number of quarters, however, the legislation has been approved without any amendments, a situation that could cause problems when it comes to software development.

As much as the constructive input of reverse engineering, almost all software developers use this technique to identify newly developed software in the hope of gaining an insight into how it works. Then, by the normal process of human learning, other software for the computer can be developed.

Reverse engineering of software is a technique used in "decoding" programs which are supplied without the original source code. The technique, though controversial, is widely used by computer software houses to allow them to design their own packages. Through widely criticised, many developers argue that, without the freedom to legally reverse analyse software, rapid development of applications software would be stifled.

Recent industry reports suggest that reverse engineering problems on platforms, which claim any that development of software for new platforms—such as the NeXT workstation series—would be severely curtailed if reverse engineering were outlawed.

According to some industry experts, software developers could not complete their important jobs without using some degree of reverse engineering. It is like

re-creating the wheel every time," and software developers told *Newsbytes*.

The industry hopes experts to be worked about the impending problems as well. Don Ehlert and Philip van IJzelen IIC officials this past few months, arguing that reverse engineering should be outlawed. But not Oppert, again while, added that the idea that reverse engineering is a necessary part of the development of software.

IIC officials share not just second thoughts to the draft legislation, meaning that any technique is now illegal. Perhaps more on the impact of IIC reverse engineering experts are making on software development companies to encourage software companies to encourage a safe place.

### Alarm System For Daring Drivers, Sleepy Pilots

LOS ANGELES, NEW MEXICO, APR 27 (AP)—A new Opticon system of

plans to modify a recently developed form of surveillance cameras' system for use by long-distance drivers and pilots. The device was initially developed for, and has been accepted by, the U.S. Air Force, which has lost 10 pilots and their aircraft since 1982 due to grossly reduced loss of consciousness.

The military version is designed to detect both drowsiness resulting from fatigue and drowsiness. It consists of a small infrared scanning module about as much long as the diameter of a pencil which is mounted on the cyp-

## Something that you can't miss...

**From The Memory Specialists**

### DRAM

4125-1080

4275-1080

525-1080

### 386MSIP Modules

154K x 8 Bits

163K x 8 Bits

446K x 8 Bits

**High Performance with Best Price!**

### Motherboards

all with Intel CPU

Model 334-B 80386-40

Model 334-24 80386SX-30

Model 334-T 80386SX-20

Model 334-F 80386SX-20

Model 334-A 80486-20/33

**STI Bare Bone Systems**

### MONTHLY SPECIAL

Model 334C-14

Model 334C-23

Other models are also available

Please call today for best prices & surprise specials!

**Splendor Technology Canada Inc.**



102-11311 Bridgeport Road

Richmond, B.C. Canada V6X 1T4

Tel: (604) 276-7979 Fax: (604) 276-3738

## Phenomenal Opportunity

On February 12, 1990  
European Safety Products (Canada) Ltd. (ESP)  
held the North American launch  
of a unique line of security products

**We are opening the Canadian market now...  
U.S. market to open soon!!!**

Products are hi-tech portable, wireless alarms  
for home, business and personal safety

## Business opportunity meeting

Every Tuesday & Thursday 5:00 pm - 6:00 pm  
(Reservation required)

## FOR INFORMATION ANYTIME

please call 649-7281

**P.S.** ESP has obtained EXCLUSIVE WORLDWIDE  
DISTRIBUTION rights for a new product that will  
literally revolutionize personal security... to be launched  
May 6th in Vancouver with massive media coverage.

**Find Out More Now!!**



mask and aimed at the pilot's eyes. The unit is placed in an electronic package slightly smaller than a matchbox, which is plugged into a power supply.

Whenever the pilot's eyes are closed or remain open without blinking for a preprogrammed interval, an alarm sounds, the plane's nose is elevated and the main engine's pilot takes over, automatically a warning and level lights send the pilot's eyes back.

The proposed device for drivers and cockpit pilots will consist of the same elements—one clipped to the headgear and the other plugged into the cigarette lighter. The device will be programmed to detect much sooner than the military version.

Reagan Optics has joined the American Trucking Association, the International Brotherhood of Teamsters, and the General American Association to participate in modifying the military version in order to insure the civilian version best meets the needs of prospective users, including in Richard Laughlin, Reagan Optics president.

General Gordon, Melbourne, Melbourne Associates, Green Valley, AZ, 602-433-0033.

## TELECOM

**Hayes Smartcom III Version 3.0**  
MOOREHEAD, GEORGIA, APR 11 (ENR)—Hayes Microcomputer Products has announced a new version of its Smartcom III communications program. Version 3.0 now supports all serial protocols, the Smartcom IIIa graphics protocol, and more, all at a reduced price of \$499.

For instance, the program supports the sharing of a single modem in multiple sessions on many popular systems, including computers from Novell, Xerox, and IBM. The program also supports remote printing through any printer using the standard laser or jet output system interface. The program also supports the new X.25 standard, known as dial-up X.25, providing the experience of up to 4 virtual connections remote computers using a single communications port and an X.25 modem such as Hayes' V-Series or Ultra 86 products.

The product is being shipped worldwide. Prices range from \$199 in such countries as Israel, to \$299 in Canada, HK\$1,900 in Hong Kong, \$91,099 in France, and \$24,995 in Germany, to \$27,170 in the United Kingdom, and \$25,000 in France in Swiss franc. Multiple copy licenses are also available.

Hayes also announced that its Smartcom Base communications program, Version 3.0, now supports 8 languages: Spanish, German, French, and Italian are supported in the same package, as well as English. Version 3.0 also supports the French format used in England and the Telex format used in Switzerland. The program will ship in June at \$499.

Contact Peggy Baker, Hayes, 404-444-3434.

## Glitz Gets A Book By Glombrunner

**WILMINGTON, DELAWARE, APR 14 (ENR)—**Alfred Glombrunner, the leading producer of telecommunications books, has finally come out with

"Glombrunner's Master Guide to Glitz," a 400-page book with a Ring-bound which could do for Glitz what a similar Glombrunner release has done for Compuserve's internet maps. The book, shipped with the book is for the IBM PC, but it can be microcomputer's Macintosh or Atari ST system.

Glombrunner writes that Glitz is engaged in a three-cornered fight which could determine the future of consumer telecom services in the U.S. in competitors—Compuserve and Prodigy—are larger.

But Glitz has many advantages, particularly its US\$4.95 per month subscription plan, which also cost less. For Glitz users, including an online encyclopedia, electronic mail, stock quotes, instant connections and shopping, for a fee of \$4.95 per month. Prodigy offers US\$12.95 monthly fee with limited capabilities, while Compuserve recently raised its monthly fee to \$14.95 for most customers to charge directly rates for its service.

Contact Alfred Glombrunner, EyeCapital Communications, 715-776-1215.

## UNIX

### WordPerfect For AS/400 382 Ships

**OREN, UTAH, APR 11 (ENR)—**WordPerfect Corporation has begun shipping WordPerfect 3.82, the first version of WordPerfect for the AS/400 IBM mainframe computer. WordPerfect 3.82. There are now WordPerfect 3.82 versions for the Unix platform: Unix System V 386, 300 MPTX, Sun SPARCstation, IBM RS/6000, and the AT&T 386.

WordPerfect 3.82 features integrated graphics, better macros, and a master document feature that allows operations in multi-tabular document files.

Priced at \$495 for single users, with multi-user licenses priced starting at \$995, WordPerfect 3.82 for AT&T 386 requires 1.5 megabytes of RAM memory for the first user and 380 kilobytes for each additional user. Free upgrades are offered for those who have purchased WordPerfect 3.82 between January 11 and April 30, 1991.

For further information, call WordPerfect's User Products Division at 800-425-4300.

### AutoCAD Release 11 For SPARCstation

**SAUNALITO, CALIFORNIA, APR 15 (ENR)—Autodesk has announced that AutoCAD Release 11 and its companion software (AutoCAD LT, AutoCAD LT/386, and AutoCAD LT/386) are now available for SPARCstation computers.**

The software incorporates all of the innovations designed into release 11 along with a series of speed SPARCstation. The AutoView user interface is now supported, with support for Open Look for sometimes in the second quarter of 1991. The company reports that OpenLook supports a microcomputer update that will be available later change in all release 11 SPARCstation computers.

Approximately 500,000 copies of the computer-aided design (CAD) software have already been sold.

# DATATRONIC COMPUTER & NETWORKING

280-12MHz System	\$745
286-16MHz System	\$819
386SX-16MHz System	\$1149
386SX-20MHz System	\$1299
386-25MHz System	\$1488
386-25MHz System, 64K Cache	\$1599
386-33MHz System, 64K Cache	\$1749
486-25MHz System, 8K Cache, 4MB	\$2688
486-25MHz System, 128K Cache, 4MB	\$2868

### System Configurations:

- 1 year full warranty (486 systems)
- 1 parallel I/O card (1 year full warranty)
- 100 hard-disk capacity
- 100 hard-disk capacity
- 100 hard-disk capacity
- 100 hard-disk capacity
- 100 hard-disk capacity
- 100 hard-disk capacity
- 100 hard-disk capacity
- 100 hard-disk capacity

**PRICE  
WAR  
SALE!**

### TWO YEAR WARRANTY

1428 Fraser Street, Vancouver, B.C. V5Y 4C4  
Tel: (604) 673-8464 Fax: (604) 673-8465

Office Hours: 10:00 am to 5:00 pm (Mon - Fri)  
10:00 am to 4:00 pm (Sat)  
10:00 am to 4:00 pm (Sun)  
Closed Monday



WE SHARPENED OUR PENCIL

**AMI**

**We sharpened  
our pencil  
even more on .....**

### Digitizing Tablets

Digitizer 10 x 12  
Digitizer 10 x 12

### Floppy Drives

1.44MB 5.25" Floppy  
1.44MB 5.25" Floppy

\$199  
\$199

### Hard Drives

10MB 5.25" HD  
10MB 5.25" HD  
10MB 5.25" HD  
10MB 5.25" HD

10MB 5.25" HD  
10MB 5.25" HD  
10MB 5.25" HD  
10MB 5.25" HD

\$199  
\$199  
\$199  
\$199

### Modems

## AMI Technology Corp.

1450 W. Broadway  
(Granville & W. Broadway)  
Vancouver, B.C.  
V6H 1B6  
Tel: (604) 731-7880  
Fax: (604) 731-7844

## NEW VIEWS



## AWARD-WINNING ACCOUNTING SOFTWARE

For a simplified, intuitive accounting system, just fit flexible reporting to current requirements, then look at New View.

- Visual approach to accounting
- Flexible to reports
- Unmatched power & flexibility
- No additional modules to purchase
- No limit to number of companies, reports, accounts or transactions
- Complete multi-calls, multi-level security & automatic crash recovery

## FREE Seminar on new version 1.33

May 10, 1991  
June 26, 1991  
July 13, 1991

Attention: Bedford Users

For a limited time, you might qualify for \$400 off NewView 386! Call for details.

TED Management Systems, Inc.  
6024 Victoria Drive  
Vancouver, B.C. V6P 3G9  
Authorized Master Dealer  
Training Center  
Ph: (604) 321-8198  
Fax: (604) 321-8938

According to the company, the 80000 version of release 11 supports Autodesk's optional Advanced Modeling Extension (AME), which offers total modeling functions that empower designers and engineers to build and analyze complex, three-dimensional models quickly and accurately, without leaving the AutoCAD environment.

According to the company, much a computer model is created, AME will analyze it by calculating the mass properties. AME geometry can be used to develop parametric applications to drive computer-aided machines that create the actual prototype or part.

Contact: Andrew Gamble, Autodesk, 610-330-0064.

## NCR Ships Document Management System

NEW YORK, NEW YORK, APR. 18 (AP)—NCR has begun shipping an enterprise Document Management System (NCR DMS), a price/performance leading system that runs on the System RDB hardware. NCR DMS data is quite unique to convert paper documents to electronic form for storage and processing.

NCR DMS is meant for paper-intensive areas such as claims processing, printed record keeping, credit card application processing, personnel record-keeping, patent processing, and order entry. Company spokespersons Connie Olson told Newsbytes the system is meant "for very high-volume, large users, people that have to store access lots of

documents."

NCR builds the software, which runs on the Unix operating system, with System RDB hardware and accompanying peripheral devices like monitors, printers, and document scanners. Olson said prices would range from \$1,000,000 for a typical 100,000-document system up to about \$10.5 million for a 100-million-document system.

Contact: Connie Olson, NCR, 610-480-1139.

## Sanyo Is Offer Mips Workstation

TOKYO, JAPAN, APR. 18 (RE)—Sanyo Electric will release this year workstation, a machine with a Mips R360 (risc) instruction set computer-based microprocessor only used now, according to the Nikkei newspaper. The price of this workstation is expected to be around 5 million yen (\$34,000).

Sanyo is also thinking of joining the ACE group, which is a multinational computer alliance created recently by 11 computer makers, according to the report.

Competition to the workstation market is fierce in Japan. A total of 150 billion yen (\$1.5 billion) worth of workstations were sold last 1990. Sales are expected to double in fiscal 1993 if there is a recovery in financial markets, such as bonds and securities firms.

Contact: Sanyo, +81-3-5455-1111.

## New Mips RISC Chip Chosen As ACE Platform

SUNNYVALE, CALIFORNIA, APR. 11 (RE)—MIPS (risc) architecture (an computing) architecture from U.S.-based Mips Computer Systems has been chosen as the hardware base for the ACE (Advanced Computing Environment) announced April 16th. Called ARCC (Advanced RISC computer architecture), the chip family from Mips has already led an addition—the 44000 which will ship later this year.

The 44000 R44000 includes CPU, integer processor, floating point processor, memory management and primary cache unit, all in one chip. Mips develops the chips, but doesn't make them—instead licensing a number of chip manufacturers to do the job. Mips is looking for a technology of computer or other manufacturers who will design new designs (called ODM's). Mips says it plans to license ACE license available for OEM use late this year, though even now Mips Company will design their own from Mips-on-chip processor chips.

One feature of the Mips RISC chips which is claimed to increase speed is "superpipelining," a scheme in which instructions are pipelined in two and each clock tick. The 44000 chip path might mean concerns, but Mips points out that the will become convinced through the '90s, especially in graphics applications and the 32-bit addressing limit of line pipelines (which allow that constant of branch/mispredict). Indeed, the latter fact is an amazing 220 bits wide, to accommodate the processes speed.

## 1991 SCO Hardware/Software Directory Published

SANTA CRUZ, CALIFORNIA, APR. 23 (RE)—SCO, the Santa Cruz Operation, has published the 1991 edition of the "SCO Directory: the Guide to Software

and Hardware Resources for the SCO Environment." Available at \$24.95 from SCO authorized providers and distributors, the directory is filled with the major information for those seeking SCO Unix-compatible programs and hardware.

The newly 1,000-page directory contains a complete listing of suppliers and is related to applications services which feature complete contact information for every company with 100,000 word descriptions of the products. The directory does not list prices and is located on SCO desktop, tel. 800-962-1582. The directory can also be ordered directly from SCO at that number.

The Santa Cruz Operation (SCL), can be contacted at 400 Fennell St., P.O. Box 1000, Santa Cruz, CA 95061, 408-415-7100, fax: 408-415-4127. In Canada: SCO Canada, 408-415-0962, fax 416-401-8887. Contact: Barbara LePavone, The Santa Cruz Operation, 408-415-7100 fax 408-408-4127.

## New "Auto Club" For Computer Owners

IRVINE, CALIFORNIA, APR. 18 (RE)—The American Computer Association (ACA), a nonprofit group, is the computer owner's equivalent to the auto club. For an annual fee of just \$400 for the first year then \$400 (the ACA offers phone support, up to three calls a year by a computer technician, software discounts as well as purchase of computer and computer equipment, mail training classes on computer management and maintenance, and Ken Logson's business of ACA).

"It's a unique concept that's a logical one," said Ken Logson. "You need to maintain insurance without inflated premiums and one can be the best insurance company—it's remaining to know how to get a phone call or help. And we've got (helped) in my commercial interest," he added.

Although many a computer manufacturer can be reached over the telephone, if necessary ACA will send out an expert from one of its premises, independently operated computer service locations in Orange and Los Angeles counties, according to the group. The first 20 members are free to members, and have access to the ACA's services. If the group work is available in a 10 percent discount the members.

Contact: Ken Logson, American Computer Association, TEL. 714/948-3833, FAX: 714/732-6338.

NEWSBYTES News Network is the largest independent computer industry news service in the world, published continuously since May 1983 with 4 U.S. and 2 International bureaus in London, Brisbane, Toronto, Taipei, Hong Kong, and Sydney, Australia, devoted to gathering the world's most significant computer and technology news.

NEWSBYTES has expanded to include the "Real Global Information" news from the Computer Association Editor-in-Chief Wendy Ward. Janet Anderson, Dana Blackburn, Jeff McCann, Michaela Mitchell, Susan Gold, Peter Valenti, Ken Takahashi, Howard Yarnes, Paul Zucker and Sam Mathews, Keith Cameron, Norman Wiggins, Bill Tobolsky.

CANADIAN EDITOR: David Butler, 117 Yonge Street, Toronto, Ontario, Canada, M5M 1Y5, (416) 548-4213, (416) 548-3315.

## We Think Small



Linda L. Segreman



Joseph Segreman

Owners of today's small businesses face greater challenges than ever before.

Like maintaining loans, developing financial controls and determining business strategy and direction.

At Healey Segreman & Co., we work with you throughout the year providing objective advice and nonpartisan support to help you manage your growing business more effectively.

## ACCOUNTING, TAX &amp; ADVISORY SERVICES FOR YOU &amp; YOUR BUSINESS

- Year end financial statements
- Bookkeeping & payroll services
- Corporate & personal taxes
- Business planning
- GST consulting

Clairbridge Centre  
500 - 650 W. 41st Ave.  
Vancouver, B.C.

(604) 266-0212

HEALEY  
SEIGNEURET  
& Co.  
CHARTERED ACCOUNTANTS

## TELECOMMUNICATIONS

# BBS List Update

A handful of corrections came in from our April 1991 BBS Listings.

We omitted several numbers for the GABBS BBS, which is, according to Gabe President Dwight Jones, the second-largest BBS system in Canada. According to Gabe, they have nine (900) 6600 local lines (734-6800), four HST 14-4 (646) lines (734-6800), two V 32 5600 local lines (734-6800). The BBS has a variety of online services including information lines. Byle magazine used a brilliant spoof from B411 to keep everything up to date. Contact Gabe by modem at 1-800-676-3111 or the BBS list for your modem speed.

## Other numbers to add to the BBS list include:

Miso Fire BBS, 576-3167. Drag racing and motorcycling, 2 new lines, on-line games, adult section. 2400-bps/MF-15

Catalyst BBS, 420-6275. Run by the Pacific Information Exchange Society (PIES), Peace, Disarmament, Ecology and Human Rights.

Airpace BBS, 270-6475. Smoking, health. 2400-bps. Badlands BBS, 433-5672. Games, Adult, some files. Local message bases. Up to 2400-bps.

## Globe Changes All Vancouver Area Access Numbers

Global Electronic Information Services (Globe) has changed its Vancouver access.com numbers as of April 22, 1991, due to a site relocation. The new number for 3003/1200/5600-bps asynchronous access is (604) 684-6800. Subscribers can call 1-800-251-0091 for more info; new users can sign up by calling Globe Customer Services at 1-800-633-0635.

# GEMINI™

Marketing, Incorporated

## MENTION THIS AD FOR FREE LABELS, FREE COFFEE.

### Retail Location

555 Clarke Rd.  
Coquitlam, BC  
V3J 3X4  
(604) 936-6400

### Shareware For

IBM  
Apple II  
Amstrad  
MS-DOS  
ATARI

OPEN SIX DAYS A WEEK



# HI-TEK

## ELECTRONICS & COMPUTERS

We, a group of Hi-Tek & Master & Backlog, now you is

### COMPUTER INFORMATION & UPGRADE

We help you choose the suitable system according to your budget & about how much we help you select the distribution for better quality and competitive price.  
IBM-XT for \$799, IBM-AT for \$1299  
286-133 for \$499, 386-33 for \$1299

### UPGRADING AND REPAIRING PC

We help you upgrade the Hardware of Windows 3.11 and upgrade your system to 386SX or to 486. 386SX for \$249, 486 for \$399, 486-33 for \$499, 486-66 for \$799

### DATA ENTRY

We provide computer operators, data for software of the most advanced technology, software & DOS, to input your business, books, P&ID books and more can complete in weeks. Software and books provided better quality than on market, you original format and can save your 10 days.

### COMPUTER PROGRAMMING

We will do computer software (Word, Spreadsheets, Accounting, Databases, etc.) and programming, and can complete in 1 week. C++, Pascal, Basic, Fortran, COBOL, etc.

No job is too small or too large, each is professionally completed in next your needs.

Call: (604) 434-6275 or (604) 685-8866 Fax: (604) 684-3215

## NewViews ACCOUNTING



The Visual Approach to Accounting

### SALES

### SUPPORT

### TRAINING

### Certified Consultants

ComputoWorks Pacific Inc.  
Vancouver, B.C.  
684-8211

## Magic Press

Leading Services for All Your Printing Needs



### DESKTOP SERVICES

- Mac & IBM Disk Conversion
- Line Output - from \$1.00
- Letter Output - from \$1.00
- Graphics Reproduction
- Typesetting



### PRINTING SERVICES

- Posters up to 18" x 24" (at \$1.00 each)
- Magazines & Booklets
- Calendars & Diary
- Brochures & Stationery
- Newspapers & Manuals
- Menus & Flyers
- Annual Reports

3000 Commercial Dr. Van.  
(48) 6-28-8000  
Tel. (604) 255-0333  
Fax. (604) 255-4466

Member of Pacific  
Print & Design Group

# AMI



## And we've sharpened it again .....

### Software

ACCPAC Bedford	\$ 1.98
Microsoft DOS 4.01	69
Microsoft Word 5.0	233
Microsoft Windows 3.0	110
Windows on Mouse	175
Microsoft Works	110
PC Tools Deluxe	102

### Laptops

IBM compatible AT compatible laptops	\$ 1999
IBM compatible laptops	649
Sequent Microsystems	2999

### Used Equipment

IBM compatible windows 3.11	\$ 199
IBM compatible windows 3.11	499
IBM compatible windows 3.11	499
IBM compatible windows 3.11	499
IBM compatible windows 3.11	499

See our brochures for more

## AMI Technology Corp.

1420 W. Broadway  
(Cornerline & W. Broadway)  
Vancouver, B.C.

Y101 1H6  
Tel. (604) 731-7080  
Fax. (604) 731-7044





















## NETWORKING \$\$\$ & SENSE

**VANCOUVER'S #1 NETWORKING COMPANY PROVIDES BEST PRICE, QUALITY, SUPPORT & PERFORMANCE**

THE UNIVERSITY OF CHICAGO PRESS

WE HAVE POINT-OF-SALE PACKAGES FOR YOUR GIFT SHOP, VIDEO STORE, RETAIL CLOTHING, GUNSHOT, CLOTHING OR JEWELLERY STORE, ETC.



**NOVELL DISKLESS 3 USER SYSTEM \$4728**

3com



No. of Iterations	Actual Topology (Minimum Band)	Shared Topology (Minimum Band)	No. of Iterations	Actual Topology (Minimum Band)	Shared Topology (Minimum Band)
3	54736	49003	25	50036	50036
4	5786	4943	26	50037	50037
5	7593	5178	27	50038	50038
6	85718	5187	28	50039	50039
7	50708	50040	29	50040	50040
8	519877	51754	30	50040	50037
9	765239	50471	31	50040	50039
10	50040	50036	32	50700	50039
11	50700	50041	33	50700	47802
12	51029	50040	34	50040	47763
13	50040	50041	35	50040	47802
14	500377	51991	36	50037	48171
15	51070	50700	26	48140	48030
16	50700	50700	30	48030	47840
17	50039	50037	32	48030	48030
18	50039	50039	34	48030	48030
19	50039	51000	36	48030	48030
20	50039	50039	38	48030	48030
21	50039	50037	41	48030	48030
22	50039	50039	43	48030	48030

**WE ARE DEDICATED  
TO NETWORK SOLUTIONS**

[illegible]

Herbert A. Simon, *Seattling*

Model	Price	Processor	RAM	Storage	OS	Weight	Dimensions
HP Elite 840 G1	\$1,299	Intel Core i5-4570	8GB	1TB	Windows 7	11.1 lbs	13.3" x 9.3" x 1.1"
HP Elite 840 G2	\$1,499	Intel Core i5-5200U	8GB	1TB	Windows 8.1	11.1 lbs	13.3" x 9.3" x 1.1"
HP Elite 840 G3	\$1,699	Intel Core i5-6200U	8GB	1TB	Windows 10	11.1 lbs	13.3" x 9.3" x 1.1"
HP Elite 840 G4	\$1,899	Intel Core i5-7200U	8GB	1TB	Windows 10	11.1 lbs	13.3" x 9.3" x 1.1"
HP Elite 840 G5	\$2,099	Intel Core i5-8200U	8GB	1TB	Windows 10	11.1 lbs	13.3" x 9.3" x 1.1"

**FILE SERVER** Multitask MT200-16MB 0.5 in. 5, 2MB, 1.2MB floppy, 10MB 5 1/4 in. Harddisk, Monochrome Display, Enhanced Keyboard, 2 Parallel & 1 Serial Ports, Ascii Card  
**COMPARISON:** Novel Network Operating System; 16 Servers under 8 users; no installed as IBM-PC/XT/AT/PS-2 to server

**HABITAT AND COMPOSITION:** Moisture rich, open areas; low vegetation or bare ground. Occurs in coastal dunes, salt marshes, and other wetlands.

## MULTITERM UNIT A LIPSON SYSTEM

- 800MHz Processor 500K
- 8GB Cache RAM
- 4GB RAM 1 2 GB Floppy Drive
- 10" Color Keyboard
- 16" Microchannel Monitor
- 500MB 1000 Voice Call Word Book
- Open 150MB Page Booking
- 4 Serial (RS) Ports
- 4 Bytes 40 Terminate
- SCSI 100MB Drive V1.0 1.0 1.0

**System Price \$9520**  
 1st Class and 2nd Class: \$14200  
 1993.500 Ford: \$4000  
 1993.500 Ford: \$4000  
 1993.500 Ford: \$4000



## ONE YEAR PARTS THREE YEARS. LABOUR ON WISE SYSTEMS

Transfer network you know! Xerox LinkShare through TCP/IP that for each different computer service of the choice is transfer flow between servers. It maximizes the success of the same time to perform multi-tasking and/or key-to-efficient customer with XEROX power. The user experience (single desktop transfer) in the XEROX network) from the shared file to make without leaving the GUI combination. The user can also cross access between XEROX and LAN without leaving the

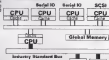
[illegible]

### COROLLARY

**486/mips**  
Sparcable, Casperfile  
No More...and Softer

This journal is the first 100% computerized magazine designed by a library. It's designed up to the minute. Register with your friends to get mailing lists, preview CD-ROMs, Contemporary and Electronic Security technology, and the performance of your system. For 1992, call them about the most powerful security challenge on the net.

1-800-893-7347 ext. 100

[illegible]

DPE COMPUTERS (Since 1983)

**CHS Computers Plus Inc.**  
8000 Midway Blvd.  
Chicago, Illinois 60631  
Tel: 800-441-1000 Fax: 800-222-0000

775 Homer BL, Vancouver, B.C. V6B 2W7  
Tel: 604-683-7847 Fax: 604-683-0210

bioethics is a conceptual development of the term "biomedical ethics" and









# ANOVATION

A Monthly Newsletter From



ANO Office Automation

## Sharp Dressed Pages



C

ome on, admit it. You are a "Do-It-Yourselfer" at heart. And, like most of us, can't resist dreaming about the extra control, satisfaction and, of course, the cost savings we can achieve if "we" were doing it. If you are one who has not yet succumbed to the wiles of do-it-yourselfer desktop publishing, it is time to take another look at how far the tools have progressed and reevaluate how you can make them work for you.

We have compiled a few general questions you should ask yourself about your publishing needs - and your business's resources required to meet those needs through a desktop publishing system.

### HOW MUCH IS ENOUGH?

If obtaining some degree of publishing self-sufficiency is your goal, first ask the question "How much do I need?" This question depends on the nature and scope of your business, your current computer experience, hardware stock - and how much you are now doing (or are not doing) that can be transferred to computer based publishing.

At a basic level most of your current day-to-day business communications such as letters, price lists, order forms, proposals, and the occasional newsletter are easily accomplished with a modest system. Your investment will pay back even sooner if you have your own existing equipment and are just adding, say, a laser printer, software and training to the package.

(Continued on page 2)

INSIDE

EtherNet .....	3	Peak Performer .....	6
Training .....	4	CGA Students .....	6
Test Tubs .....	5	May Madness .....	7
Head Start .....	5	Annotations .....	8

## ON VACATION

This will be the last issue of ANOVATION until August. So have a great summer and we'll see you in two months.

## RESOURCE ECONOMICS

More than just the resources you will spend on equipment, software and training are the new ways you and your staff will have to work. The reallocation of resources and responsibilities is sometimes difficult. The sales/marketing team may want to produce new sales support documents, a proposal and estimate just as your company newsletter is due on the press. Most people find that there are so many things that can be done on the system that it becomes a little competitive for time on the system and/or its designated operator.

The true value of Desktop publishing is usually the dramatic increase in both flexibility and turn around time you can achieve when you only have to communicate your requirements to a co-worker, or just move them directly onto the screen of your computer.

## LET'S TALK TERMS

Here is a list of terms used in the lingo of Desktop Publishing translated into plain English and illustrated with relevant issues.

### DPI DOTS PER INCH

Number of dots a laser printer can produce in one square inch. This is relevant for quality of image. The higher the number the better the image quality of your graphics. 300 DPI is a standard in the industry and printers at and around this resolution produce crisp type and graphics for most needs. Higher resolution laser printouts of up to 2,400 dots per inch (on photographic paper) can be obtained through service bureaus around town for your high quality newsletter, brochures, flyers, proposals etc.

## CAMERA-READY ART

The pages you create for your printer to use in traditional offset printing. The printer literally takes a picture of your artwork and creates photographic negatives to make the printing plates used in the process. Always talk to your printer about the job first, until you are very experienced. Even veteran graphics people take the time to consult with their printer - so should you. Your printer will tell you the best way to produce the artwork for your specific project and printing method. Yes there are quite a few methods. Be prepared to

"The true value of Desktop Publishing is usually the dramatic increase in both flexibility and turn around time."

learn lots. Some things you can do on the computer that look fine to you just won't translate well into print.

## GRAPHIC FILES Postscript

Postscript is a page description language that drives your (and anybody else's) Postscript laser printer. What this means is the computer file created that the printer where each word, line and graphic should go is consistent from printer to printer either your 300 DPI laser printer or the service bureau's 2,400 DPI imagesetter. The output file is, therefore, said to be device independent.

## EPS

Encapsulated Postscript Files produce the best quality graphics since the Postscript page description language creates graphics which may be scaled to any size and still retain all their original detail. File sizes are also relatively small compared with other

graphic formats.

## TIFF

Tagged Information File Format. These kind of picture files are of the "raster" variety. That is they are composed of individual blocks of black or white scaling them down makes them look better, but scaling them up creates less quality images. There is a real file size limitation for this format with even small images translating into very large files.

## CD-ROM

Compact Disk Read Only Memory - Similar to the now nearly universal musical CDs these contain use the same laser technology to store vast amounts of graphical images, or fonts on them for your convenience literally thousands of

images are readily available. Frequently these disks have 600 Mega bytes of files on them, enough to fill up just as many ordinary floppy disks.

## IN REVIEW

Desktop publishing is quickly becoming a standard function (in some shape or form) in homes and offices around the world. The ability to combine graphics and text in a document that would rival anything a typesetter could produce is making it very attractive indeed.

As well, today's hardware which best suits DTP is falling in price rather rapidly. Such items as 33MHz 386 systems and laser printers are now within reach for many home and small business users.

If you would like to go as far as to produce a newsletter, or simply want to spiff up your price list, there is something to fit both your needs and budget. Good luck and happy publishing!





# EtherNet Explained

**M**aking a decision on which type of network scheme to use is a very difficult one indeed. With all the possibilities it can sometimes be a little overwhelming.

In this, our first of a series of articles on network computing, we will cover the Ethernet (also known as linear-bus) network topology. Our primary focus will be on what it is, and what networks does it best suit. If you have any questions on this or any other matter on networking, please feel free to talk to a network consultant at any one of our 9 locations.

## WHAT IS ETHERNET ?

In its most common form Ethernet networks under Novell, LAN Manager, Banyan Vines, and LANtastic have a main trunk of cable with off shoots which attach to the work-



## • Network Corner •

By  
Camino Di Marco

stations and file servers (see Figure 1). The trunk is referred to as a linear-bus because it is a single line which is being constantly poled by all stations.

Each workstation has a network interface card (NIC) attached to the trunk. The NIC constantly monitors the network for signals. If a workstation has a request, it checks for a clear line and transmits the request.

Should two or more stations send out a request at the same time, the signals will collide. Each station will

then be given a scheduled retransmission time.

This is known as a contention scheme with CSMA-CD (Carrier Sensitive Multiple Access with Collision Detection), and is defined by the IEEE specification 802.3. This specification is very important. Without it, manufacturers could theoretically create their own standards, thus raising havoc for end users.

## HOW IS IT DIFFERENT ?

Ethernet differs from ARCnet and Token Ring by the way the line is poled. As was discussed earlier, under the linear-bus scheme, each station monitors a single line or trunk for a clear signal. When it gets the go ahead the NIC makes the transmission.

ARCnet and Token Ring use what is referred to as a token passing scheme. With this type of topology a token is passed around to each station. If the station has nothing to transmit the token is passed on to the next NIC. Since only one station has access to the network at a time, there are no collisions in transmission.

Over all there are no major performance differences between linear-bus and token passing topologies. Raw specifications (Mbps transfer rate), however, would dictate that Ethernet and Token Ring are the faster of the three. These specifications are important only under certain conditions.

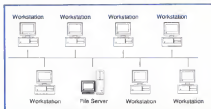


FIGURE 2: A standard linear bus topology



## PROFESSIONAL

## TRAINING

British Columbia  
Institute of  
Technology (BCIT)ANO / CCI  
Professional  
Training

Date	Course	Course #	Duration	Fee
May 06	ACC/PAC A/B	56074	4 wks	\$ 151.
May 07	Lotus 1-2-3 Level I	33079	4 wks	\$ 161.
May 07	dBase IV Level II	53562	4 wks	\$ 151.
May 08	WordPerfect Level II	53568	4 wks	\$ 161.
May 08	Ventura Publisher	56055	4 wks	\$ 151.
May 08	WordPerfect Level I	33076	4 wks	\$ 151.
May 09	Lotus 1-2-3 Level II	53610	4 wks	\$ 151.
May 27	Intro. to DOS	55706	6 wks	\$ 201.
June 04	Lotus 1-2-3 Level II	53644	4 wks	\$ 151.
June 04	dBase IV Level II	53605	4 wks	\$ 151.
June 05	WordPerfect Level III	53661	4 wks	\$ 151.
June 05	Ventura Publisher	56061	4 wks	\$ 161.
June 06	WordPerfect Level II	56033	4 wks	\$ 151.
June 06	Lotus 1-2-3 Level II	53667	4 wks	\$ 151.
June 10	ACC/PAC A/B	56100	4 wks	\$ 151.

Call BCIT at 434-3030 to register

Date	Course	Location	Fee
May 01	PageMaker Level I	Richmond	\$ 165
May 02	Windows 3.0 Level I	Richmond	\$ 165.
May 07	WordPerfect 5.1 Level I	Richmond	\$ 165
May 08	Quattro Pro Level I	Richmond	\$ 165.
May 09	WordPerfect 5.1 Level II	Richmond	\$ 165
May 11	Intro. to Microcomputers	Richmond	"FREE"
May 14	Intro. to DOS	Richmond	\$ 165
May 15	Ventura Publisher Level I	Richmond	\$ 165.
May 16	Word for Windows Level I	Richmond	\$ 165
May 21	The Macintosh Level I	Richmond	\$ 165.
May 22	Bedford Level I	Richmond	\$ 165
May 23	Lotus 1-2-3 Level I	Richmond	\$ 165.
May 29	Excel for Windows Lev I	Richmond	\$ 165
June 04	Lotus 1-2-3 Level I	Richmond	\$ 165.
June 05	PageMaker Level I	Richmond	\$ 165
June 12	Ventura Publisher Level I	Richmond	\$ 165.
June 13	Lotus 1-2-3 Level II	Richmond	\$ 165
June 19	Excel for Windows Level I	Richmond	\$ 165.
June 20	Quattro Pro Level I	Richmond	\$ 165
June 26	The Macintosh Level I	Richmond	\$ 165.
June 26	Bedford Level I	Richmond	\$ 165
June 27	MS Word 5.0 Level I	Richmond	\$ 165.

Call your nearest ANO office for further information

DISADVANTAGES OF  
ETHERNET

There are two obvious disadvantages to Ethernet. First off, the IEEE 802.3 standard only supports line or trunk cable distances of just under 700'. This is easily avoided by using either multiple network cards in a single file server, or repeaters that retransmit the signal after a certain distance.

Secondly, should the trunk cable experience problems the entire network will crash. On larger networks over longer distances finding the problem with the trunk could be difficult. This, however, is not a com-

mon occurrence and shouldn't really have any bearing on your buying decision.

ADVANTAGES OF  
ETHERNET

Generally speaking, Ethernet is ideal for small networks (under 30 nodes) which have relatively light traffic requirements. It is very quick under these conditions and acts as an ideal backbone for internetworking other LANs in the same premises.

Ethernet is also much less expensive to cable since only one dedicated cable run is required. Under token

passing schemes each station has a dedicated line which is attached to expensive hubs or multi-station access units.

## IN REVIEW

Ethernet is quickly becoming the most popular network protocol. Its cost effective cable and hardware requirements, and performance specifications make it the ideal solution for small to medium sized networks.





## MAXIMIZING LANTASTIC

Here are a few tips on loading the network version of The Macintosh onto a LANtastic peer-to-peer network.

1. You must be using Microsoft DOS 4.01 or higher (we haven't tried Digital Research DOS 5.0 so no guarantees there).
2. SHARE must be loaded on initial boot up.
3. If the version of the Netware runtime included with your Maximizer is lower than 5.1 then you must upgrade. This is available through Richmond Software.



## TECH • TALK

WITH  
KEN NG

We thank Mr. Steve White of Richmond Software for his insight on this matter.

### DUPLEXING vs MIRRORING

Q. What is the difference between disk duplexing and mirroring?

A. The difference is quite simple. With duplexing you have two hard drives and two controllers. When data is written to one drive it is simultaneously written to the other drive. This is common in fault tolerant networks where down time is critical. Should one drive cut out, the second drive will continue to function without interference to the user(s).

Mirroring is quite similar except that it uses two hard drives and only one controller. Consequently, should the controller or the primary hard disk fail so will the system. However, downtime is minimized since only one of the drives or controller need be replaced.

Of the two methods, duplexing makes more sense.

## GIVE YOUR FAMILY A HEADSTART



Putting together a home computer system can be both confusing and expensive, when adding in all the software and extras that you may need. Ideally, a home system should come with all the bells and whistles built right in, with a little room for future requirements. All at a price that won't send you to the poor house.

The HeadStart CD series from Magnavox / Philips meets the above criteria with flying colours.

Available in a 286 and 386ix versions, the HeadStart offers everything home computer users of every age could want. Standard features include a 3.5" 1.44MB floppy drive, one 5.25" 680MB CD-ROM drive with full audio capability, VGA graphics adapter, VGA colour monitor, 2400bps internal modem, 3 button mouse, headphones to listen to music, and 52 different software packages with full documentation (22 applications plus 30 games). Each 286 includes 1MB of RAM and a 40MB hard disk, while the 386ix version includes 2MB of RAM and an 80MB hard

disk drive.

One of the most unique features of this system is the CD-ROM drive. Like the CD for your stereo it can play music using standard compact discs in full stereo sound. Just pop in your favorite disc into the system, select CD Player from the HeadStart menu using the mouse and up comes a full colour image of a home CD system. Click on the play button on the screen and enjoy. Plus you can continue to use your system normally while the CD is still playing.

Some of the more notable applications which are provided with the HeadStart (on compact disc of course) include all 21 volumes of Grolier's Electronic Encyclopedia with graphics, PC Globe (world atlas with graphics and statistics), The Manhole adventure games with full stereo sound, Mavis Beacon Teaches Typing, Borland's Quattro 1.0 spreadsheet, Deluxe Paint II (for the artistic computer user) and Q&A 3.0 word processor/file database.

The intuitive HeadStart Environment makes learning on the computer that much simpler. By using pull down menus and the mouse, first time users will find starting programs and getting around easy and fun.

All in all the HeadStart is the best home computer system money can buy. The software selection and hardware provided is like nothing available on the market today. Ask your AND rep for our special introductory pricing on the HeadStart 300CD (286) and 500CD (386ix).





# PEAK PERFORMER

Today's question is not whether to backup your hard disk, but rather how to go about doing so. With the sheer size of applications growing, and the popularity of networking becoming stronger, the need for a reliable tape backup system which still fits the budget is becoming paramount.

Whether you're networked or running stand alone, one of the best products on the market today for backup purposes is Mountain's FileSafe 8000Plus line of subsystems. Available for both IBM compatibles and PS/2's, the 8000 line offers both reliability and performance.

## HIGH CAPACITY

Utilizing DC2120 extended length cartridges, coupled with Mountain's proprietary MACH controller and FileSafe software, between 80 and 304MB of data can be stored on one tape. Making it the ideal solution for your growing needs.

Plus, if you are already using a QIC-40 format compatible drive (such as Mountain's 4000 family or the Colorado Jumbo), the 8000 series can read tapes which they have created. Thus making the upgrade path that much easier.

## MACH PERFORMANCE

Most reasons for not backing up is that it takes too much time. Any user of the 8000 will attest that speed is definitely not an issue.

Utilizing Mountain's own MACH2 controller, up to 4 Megabytes of data can be stored in one minute using the MT-101 format. With its unique "format on the fly" feature, you won't have to waste your

time pre-formatting tapes before backing up your data.

## EASY TO USE

FileSafe, the standard tape operating software used on all Mountain tape storage platforms, provides a consistent user interface.

FileSafe combines the power to perform sophisticated data management tasks with the flexibility that allows you to define tape operations that meet your own individual data management requirements. You can specify any level of selective file or full image backup and easily program a Mountain tape system to perform unattended backup operations.

The software can be operated through menus or from the command line, making FileSafe equally productive for novice and advanced users. Context sensitive on-line help screens can guide you through all of FileSafe's features, virtually eliminating the need to refer to the user manual.

## NOVELL APPROVED

With Novell Netware being the number one network operating system of choice for PC LAN environments, it only makes sense that the 8000 series is tested and approved by Novell Inc. The PS8000 is also compatible with PC LAN, LANtastic, MS Net, and 3Com LAN operating environments.

For more information on this or other Mountain tape backup systems please contact the ANO office nearest you, or mail in your reader response card.



## ANO TO OFFER CGA APPROVED PHILIPS, ROLAND, & TOSHIBA

With the backing of Philips Electronics, ANO Office Automation has been selected as a preferred vendor to students of the CGA Associations' Program 90.

Program 90 requires second year students to invest in a personal computer. The curriculum covers everything from the insides of a PC, to spreadsheet and word processing technology. A superb set of documentations plus full phone support is provided to each student.

"We are very excited about this opportunity," exclaims Toby Chu, CEO of ANO Office Automation. "Historically we have been strong in the educational marketplace, however, this opens up channels previously unavailable to us."

Representing the Philips' line of PCs, Toshiba portables, and Roland/Panasonic printers, all 9 ANO locations will be involved in this nationwide undertaking.



## Take Your Show



## On The Road.

With a Sharp PC-6220 Notebook Computer,  
& Canon BJ-10e Portable Printer

**\$3,095<sup>00</sup>**

**Standard Features:** PC-6220 - 1MB RAM, 1.44MB floppy drive, 20MB hard drive.  
Canon BJ-10e - Bubblejet technology, 360dpi, Optional battery.

**Canon BJ-300**



Only  
**\$750.00**  
Reg. ~~\$895.00~~

- ☐ Superior Print Quality
- ☐ 360 DPI Resolution
- ☐ 150, 300, 600 cps
- ☐ Simple to use



# ANO TATIONS

## SIMPLY WINDOWS

In an April 15th press release, Computer Associates of Garden City, New York announced the second quarter release of Simply Accounting for the Microsoft Windows 3.0 operating environment. Listing for \$ 225 Canadian, the entry level package will offer small businesses a simple transition into computerized accounting. Bedford users will be able to move their data into this new system via an upgrade utility. Further information is available from Computer Associates at (804) 733-2343.

## 40 MEG SHORTAGE

Due to an industry wide shortage of 2"

40MB hard drives, all manufacturer's of notebooks are experiencing difficulties in meeting the demands for higher storage capacities. Currently only two major drive manufacturer's are supplying 40MB versions - Conner and Prime Tech. Notebooks from AST, Sharp, and Toshiba are set for back orders that exact dates of arrival cannot be made. We apologize for any inconvenience this may be causing our customers; however it is out of our control.

## 1 MEG WONDER

ATI Technologies of Ontario is now shipping all of its award winning Wonder Plus VGA video boards with 512K standard memory ex-

pandible to 1MB on-board. To users this means that more colours can be accessed concurrently in higher resolution modes.

## OOOPS!

In the April 1991 issue of ANOVATION we wrote that The Maximizer from Richmond Software (Burnaby, B.C.) was incompatible with LANtastic. Well we were wrong. See the subsection in Tech Talk entitled "Maximizing LANtastic" on page 5 for tips on setting up The Maximizer on LANtastic.



## Reader Response Card



Contact: \_\_\_\_\_  
Position: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
Prov. \_\_\_\_\_ Postal Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Local: \_\_\_\_\_  
Fax: \_\_\_\_\_

Please send me ANOVATION monthly.

Please have an ANO Rep contact me: ☐

Please send me more information on:

- ☐ Desktop Publishing      ☐ Canon BJ-300  
☐ Networking                ☐ Sharp 6220  
☐ HeadStart                   ☐ Computer Training  
☐ Canon BJ-10e Printer      ☐ Simply Accounting

Suggestions: \_\_\_\_\_

## ANO OFFICE AUTOMATION

Please mail to the ANO office nearest you:

**ANO RICHMOND**  
9119-11106 Yonge/Stuyvesant Way Richmond B.C. V6X 3G1  
Ph: (604) 278-8886

**ANO VANCOUVER**  
4150-840 Howe Street Vancouver B.C. V5Z 2M1  
Ph: (604) 681-6965

**ANO BURNABY**  
3671 Kingsway Vancouver B.C. V3R 5L8  
Ph: (604) 432-7277

**ANO SURREY**  
112K 12827-750 Ave. Surrey B.C. T2M 2V3  
Ph: (604) 594-8482

**ANO VANCOUVER ISLAND**  
46 1824 Johnson Street Victoria B.C. V8V 9N6  
Ph: (604) 386-0204

**ANO KELDOWNA**  
416-2972 Harvey Avenue Kelowna B.C. V1Y 8K6  
Ph: (604) 861-8300

**ANO EDMONTON**  
10001-108th Street Edmonton AB T5J 1T7  
Ph: (403) 425-4998

**ANO TORONTO**  
Unit #1 2nd Floor, 238 Eglar Park Drive  
Markham, ON L3R 1Y0  
Ph: (416) 475-1304

**ANO OTTAWA**  
1181 Carleton Avenue Ottawa ON K1H 7Z8  
Ph: (613) 722-7150